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Worldwide Report

TELECOMMUNICATIONS POLICY,
RESEARCH AND DEVELOPMENT



FOREIGN BROADCAST INFORMATION SERVICE

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1 February 1984

WORLDWIDE REPORT
TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

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AUSTRALIA

BRIEFS

NEW COMMUNICATIONS FIRM FORMED--SYDNEY, 16 Dec--Reuters, the world news organization and the Australian Associated Press today announced the formation of a new company to develop advanced communications facilities for distributing news and information by satellite all over Australia. The new company, known as AAP-Reuters Communications Pty Ltd, will establish a major new network based on the Aussat domestic satellite system, recently given the go-ahead by the Australian Government. The company plans to instal its own transmit and receive dishes in all Australian state capitals, plus about 50 more receive-only earth stations in provincial centres. [Text] [Rangoon THE WORKING PEOPLE'S DAILY in English 18 Dec 83 p 7]

CSO: 5500/4359

NATIONWIDE TRUNK DIALING SYSTEM INAUGURATED

Dhaka THE BANGLADESH OBSERVER in English 9 Dec 83 pp 1, 12

[Text] Rear Admiral M. A. Khan, DCMLA and Minister for Communications formally inaugurated in Dhaka on Thursday the first phase of the nation-wide trunk dialling system by making the first call from his office to Chittagong, Khulna and Bogra, reports BSS.

In the first phase electronic digital Automatic Trunk Exchange (TAX) have been installed at Dhaka, Chittagong, Khulna and Bogra to facilitate the subscribers of these cities to dial among each other directly.

With the present arrangement of nationwide dialling network (NWD), any subscriber of Dhaka, Chittagong, Khulna and Bogra can be able to dial each other directly.

Bangladesh T and T Board is going to include five more exchanges at Sylhet, Comilla; Rangpur, Jessore and Cox's Bazar in second phase by March next year into NWD network.

An official source said Rajshahi, Dinajpur, Pabna; Kushtia; Barisal, Patuakhali, Faridpur; Narayanganj, Majdee Court; Mymensingh and Jamalpur will be included in the third phase by June Narsingdi, Moulvi Bazar; Tarigal; Bagerhat and Thukurgaon will be included in the fourth phase by the end of next year and thereby all the important automatic exchanges will be covered by this NWD network, the source said adding the whole country will be covered on completion of the fifth phase through connections from automatic exchanges.

The code numbers of the NWD network and as follows:

For Dhaka dial code-02 from Ctg., Khulna and Bogra.

For Ctg. dial code--031 from Dhaka, Khulna and Bogra.

For Khulna dial code-041 Dhaka, Ctg. and Bogra.

For Bogra dial code--051 from Dhaka, Ctg. and Khulna.

CSO: 5500/7073

BANGLADESH

BRIEFS

INTERNATIONAL DIRECT DIALING--Chief Martial Law Administrator Lt Gen H M Ershad on Monday inaugurated the first international direct dialing between Bangladesh and other countries of the world, reports ESS. Gen Ershad made the first international direct dial call from his telephone at the CMLAs Secretariat to President Junius Jayewardene to Sri Lanka. They exchanged greetings and good wishes. [Text] [Dhaka THE BANGLADESH TIMES in English 6 Dec 83 p 1]

CSO: 5500/7072

INDIA TAKES FULL CONTROL OF INSAT-1B; PLANS TOLD

New Delhi PATRIOT in English 11 Dec 83 p 7

[Text] BANGALORE, Dec. 10 (UNL PTI)—Indian space scientists have taken full control of INSAT-1B satellite which completed 100 days in space yesterday.

INSAT project director P P Kale told UNI today that the satellite was an "unqualified success" and was doing "exceedingly well." It was being used to boost space bases services in telecommunications, meteorology and radio and television networking.

Scientists from the California-based Ford Aerospace and Communications Corporation, builders of the satellite, who were in joint command at Hassan's Master Control Facility (MCF), left on 7 December. Hitherto the FACC scientists were responsible for the spacecraft's control. Now MCF would be fully manned by scientists of the Indian Space Research Organisation, he said.

Prof Kale said it only remained to ensure that the satellite completed its estimated in-orbit life of seven years.

Enumerating some of the uses to which it was put, he said the recent Ahmedabad cricket test was telecast through INSAT-1B by means of a transportable terminal. Thirty three land terminals, including the one in Bangalore, were in operation.

Nearly 500 augmented direct reception television sets were being used in Andhra Pradesh and Orissa to telecast programmes through INSAT-1B.

He said all the 28 ground stations of the posts and telegraphs department were using the satellite, and 400 telecommunication circuits were in operation.

Prof Kale said the meteorological department was already using ten full frame images from INSAT-1B for weather forecasting. About six unattended data collection platforms from places as far removed as Hassan, Srinagar and Calcutta were also in operation.

Twentyeight stations of AIR have been brought under the INSAT-based radio networking scheme. Special receiving equipment has been installed at these stations to receive programmes directly from the satellite.

These AIR stations are: Agartala, Ahmedabad, Aizawl, Bangalore, Bhopal, Calicut, Coimbatore, Cuttack, Gangtok, Gauhati, Gorakhpur, Hyderabad, Imphal, Jaipur, Jalandhar, Jeypore, Kohima, Leh, Lucknow, Panaji, Pondicherry, Raipur, Ratnagiri, Rohtak, Siliguri, Srinagar, Trivandrum and Visakhapatnam.

Broadcasting house New Delhi is feeding programmes to INSAT-1B through the Delhi earth station of the P and T Department. At present, the facility exists for simultaneous feeding of two programmes to the satellite from the Delhi earth station.

This will be enhanced to 5 programme channels in the course of the next one year. Simultaneously, the uplink facility will be extended to the other three metropolitan centres namely, Bombay, Calcutta and Madras, where single channel programme feeding facility to the satellite on time shared basis has been planned.

By the time the programme feeding facilities to the satellite are fully established at all the 4 centres, the special receiving equipment would be installed at all the 86 stations of AIR, the press release said.

CSO: 5500/7066

PLANS FOR REMOTE SENSING SATELLITE TOLD

Bombay THE TIMES OF INDIA in English 11 Dec 83 p 3

[Text]

BOMBAY, December 10: India has developed the Polar Satellite Launch Vehicle (PSLV) technology and the PSLV rocket will be launched within five years carrying a remote sensing information satellite weighing 1,000 kg.

The satellite will be placed at an altitude of 900 km. according to Dr. Vasant Gowarikar, director of Vikram Sarabhai Space Centre, Trivandrum.

The satellite will make available valuable information on mineral resources, crops, weather, oil and ocean resources and help ease communications within the country to such an extent that the country will be on the threshold of a economic and sociological revolution, Dr. Gowarikar said.

Speaking on "Our space programme, present and future", here today at a function organised by the Indo-French Technical Association, he disclosed that the satellite would bring about change in the quality of life of the common man comparable to the introduction of the railways and air travel.

SOCIAL FACTORS

Social factors are decisive in technical advances and technical and economic obstacles are not as serious, he observed, tracing the rocket technology in India from the 18th century when indigenous rockets were used by Hyder Ali against the British forces. But, somewhere along the way, India lost the initiative in rocket development.

That human beings have a stellar ancestry was perhaps known only by Indians long back and hence India's interest in outer space, he said. Indians with their scholarly and intellectual interests have a bright future in space research, he added.

Mr. S. P. Godrej, sheriff of Bombay and president of the association, welcomed the guest and presided over the function. IPTA is a scientific body made up of engineers, scientists, inventors etc., who have had their training in France and are involved in technical and scientific collaboration between India and France.

INDIA, FRANCE TO COLLABORATE IN COMPUTER TECHNOLOGY

New Delhi PATRIOT in English 16 Dec 83 p 10

[Text] India and France have agreed to collaborate in a host of frontline areas of computer technology, both hardware and software, and electronics, reports PTL.

Besides, France will also give to the extent possible soft credit on a long-term basis for purchase of France equipment and knowhow by India.

An agreement to this effect was initialled in Delhi on Wednesday following the three-day meeting of the Indo-French working groups on computer hardware, computer software and informatics.

The Indian side was led by Dr N Sheshagiri, Director (Computer Development), Department of Electronics and the French delegation was led by Mr Christian Stoffaes, additional secretary, Department of Electronics and Informatics in the Ministry of Industry and Research.

The highlight of the agreement is the vertical transfer of technology from France to India. This covers super mini computers, computer peripherals, packaging technologies and sophisticated components with buy-back arrangements in certain peripherals like floppy disc drives.

Specific projects and areas have been identified for Indo-French cooperation for third countries combining the knowhow base of France and the low-cost manpower available in India. T.

The French electronics industry has realised the importance of taking India as a major partner for their expansion drive in computer hardware, software and services throughout the world.

France is reportedly considering using India as a major base for expanding their electronics trade worldwide. India will considerably benefit by a continuous flow of high technology, which is otherwise difficult to acquire, it is learnt.

In computer hardware, one of the Indian partners, the Computer Maintenance Corporation of India, has offered to carry out the installation and maintenance

of French systems in foreign countries on behalf of French EDP manufacturers.

The French partners have proposed software and hardware for computer-aided training programmes. The Indian side has offered its assistance for designing training programmes in English.

The Indian side has proposed hardware and software to be used for flight data analysis, devoted to Airbus aircraft, for which the "Airbus Industries" of France will be approached.

The Electronics Corporation of India (ECIL) has presented to CIT-Alcatel a project for using a new Indian-made mini-computer to pilot the E-10 switching system. This proposal is, at present, under consideration by ECIL, about software transfer.

The Indian side has considered the possibility of purchasing peripherals for low-cost telematic minitel terminals, equipment for railway reservation and ticketing, banking terminals and fastline printer.

CSO: 5500/7068

REPORTAGE ON DELHI NONALIGNED MEDIA CONFERENCE

Gandhi Opening Address

Madras THE HINDU in English 10 Dec 83 p 9

[Text]

NEW DELHI, Dec. 8.

'The four-day conference of media representatives from the non-aligned countries — the first of its type — began here today, with the Prime Minister, Mrs. Indira Gandhi, stressing the need for a greater and more balanced exchange of information among the developed and developing countries.

Mrs. Gandhi addressed the conference after it was inaugurated by the UNESCO Director-General, Dr. Amadou-Mahtar M'Bow. Striking a hopeful note for the new international information and communication order, he said it had become a fact of life and was irreversible.

The Prime Minister dwelt on the challenges facing the third world in the field of information. Lacking the means to gather and disseminate more information about others, the developing countries had to rely on powerful transnational news agencies and media organisations. "These organisations have their own motives in selecting and interpreting events. This bias may be national or ideological or merely that of self-interest. It is perhaps impractical to expect total objectivity, but it is not too much to ask for fairness," she said.

Reaffirming India's support to the new international information and communication order, she did not share the views of those who saw in it an infringement of freedom. "Why should an information order be mistaken for ordered information?" she asked, citing the efforts of the UNESCO and others to counter the propaganda barrage.

The democratisation of power structures within nations, in her opinion, must be followed by democratisation of the international community and in this process communication had a function. "We need to know more about one another and make a conscious effort to remove imbalance and disparity in getting information."

Mrs. Gandhi did not like the way in which the media in the West, and even in India, ignored news about developing countries, unless it related to disaster or disturbance. "The stupendous task of development, the changes

being brought about in our villages and our towns, among our women, our workers, our farmers and others might as well be non-existent.

"Editors and media managers seem attached to the Northcliffe formula that power, position, money and sex make news — and that virtue, normality, hard work and humility do not. The mask may one day inherit the earth, but not the headlines."

Many journalists, she said, thought it was smart to imitate the popular western definition of bad news being good news and were bored by constructive and developmental activity. She referred to a recent survey of the Indian Press Council which found that only two per cent of newspaper space was devoted to social issues. "Is this what really interests readers? Are they content to remain ignorant of what is happening in various spheres, of what deepens their understanding, what helps them discharge their duty as well-informed citizens?"

Mrs. Gandhi wanted the media not to be preoccupied with the doings of political parties and persons in office and administration, but keep in mind the information requirements of the rural people. She counted on the radio and the television to fill the gap.

Sharp reaction: Tracing the history of the non-aligned news pool since the New Delhi declaration of 1975, Mrs. Gandhi wondered over the sharp reaction to it in the West. It was repeatedly stated that the main objective of the pool was to concentrate on development news of the non-aligned countries and not to compete with well-established news agencies, but the Western press — and several Indians — reacted against it.

This was not the only issue on which such a convergent approach had been noticed, she said, adding with a dig at the erstwhile critics of the pool: "I see with some amusement the names of some of those who were loudest in its deprecation now in the forefront of this conference. Have they been converted or has the concept changed?"

She drew attention to the imbalance in the communication technology which had led to a series of problems like the denial of a just share to the third world in satellite orbital positions and radio frequencies and dependence for software. She wanted relations in international communication based on a spirit of cooperation.

Dr. M'Bow noted that after the bitter polemics of almost a decade, the debate on the new order appeared to be entering a more serene and constructive phase.

No one now denied, he said, the existence of grave imbalances and profound disparities in the field of information and communication nor disputed the consequences of such a situation, particularly the threats posed to the blossoming of individuals, development of societies and understanding between peoples and world peace.

Happy at the New Delhi initiative, he noted that this was the first time that third world journalists had come together on such a vast scale to think aloud together on the problems and perspectives of the new order, to strengthen cooperation between them and to make their contribution to UNESCO's action in this field. The professionals like those gathered today, he said, could play an outstanding role to usher in a new future for all mankind. This could be done by a relentless pursuit of truth in full freedom of conscience, and with a sense of responsibility. He was sure that there would be many a follow-up to the New Delhi conference.

The steering group chairman, Mr. Nikhil Chakraverty, said the idea of the present conference as mooted during the non-aligned summit earlier this year and the main issue before it would be the imbalances and threats posed by developing technology. The steering committee Secretary-General, Mr. Som Banerjee, referred to the way the media of the developed countries tried to inform cleverly, misinform cunningly and disinform mischievously.

Office-bearers: The plenary session of Namedia unanimously elected Mr. Nikhil Chakraverty as chairman of the conference. Meeting immediately after the inaugural function, the session endorsed the agenda for the conference drawn up by the national preparatory committee.

Mr. P. Unnikrishnan, Deputy General Manager of PTI, was elected Rapporteur-General for the conference. Mr. Brown (Ghana), Mr. Mushahid Hussain (Pakistan) and

Mr. Suarez (Nicaragua) were elected to the panel of chairmen. Mr. John Ping (Gabon) and Mr. N. Ram (India) were elected Chairman and Vice-Chairman respectively of the commission on imbalances while Mr. D. R. Mankekar (India) and a delegate from Cuba were elected Chairman and Vice-Chairman respectively of the commission on new technologies. Mr. D. R. Goyal and Mr. N. V. K. Murthy, both of India, were elected rapporteurs respectively of the commission on imbalance and commission on new technologies.

Media ownership is not the issue, says UNESCO chief

NEW DELHI, Dec. 9.

The Director-General Of UNESCO, Dr. Amadou Mahtar M'Bow, today stated that the key issue in bringing about a new world information and communication order was whether the journalists could work in conditions of freedom and independence, no matter who owned the media.

Dr. M'Bow, who was replying to a spate of questions at a press conference on this subject, said if media was owned by the private sector, it did not necessarily mean freedom was ensured for the journalists and if media was owned by the Government, it did not necessarily imply that the journalists could not function with freedom. For instance, the BBC was owned by the British Government, but the journalists there had freedom.

The UNESCO Director-General said that there was no country in the world which did not have mass media like radio and television. The reality of the situation was that newspapers were owned by the private sector and mass media by the Government. The main question was whether or not the journalists were able to function in full freedom.

Asked whether he would recommend the BBC model to a country like India, he replied that he would not recommend any model to anyone. It was for each country to choose the model best suited to it.

Dr. M'Bow said that after independence, in developing countries, the Government had inherited the means of communication created by the colonial rulers. The time had come for the international community to help developing countries improve the communication infrastructure so that the existing imbalance in news flow was corrected.

Report on 10 Dec Session

Bombay THE TIMES OF INDIA in English 11 Dec 83 p 1

[Text] NEW DELHI, December 10. DELEGATES to the media conference of the non-aligned (NAMEDIA) today broadly discussed at separate sessions the causes and consequences of imbalances in information flow as well as the implications of the new information revolution of developing countries.

According to the conference spokesman, everyone agreed on the relevance of the new world information and communication order (NWICO) and the rationale of NAMEDIA. In fact, according to him, a suggestion was made to create a mechanism to continue the work of the conference backed by what might be called a New Delhi declaration.

The western news agencies come in for familiar criticism. Bias in reporting developments in the developing world, projecting the foreign policies of their countries, working against peace and, in some cases, acting as cover for intelligence agencies were among the charges listed against them.

Nonetheless, the spokesman stated, few spoke of supplanting the agencies or called for any hostile actino.

As for suggestions for the future, the delegates proposed, apart from continuing in some form the concept of NAMEDIA, governments of the third world should be persuaded to assist its programme with funds.

Most of them favoured the non-aligned news pool. Some considered that the creating of a task force for examining its operations with a view to increasing its efficiency and credibility was necessary.

The spokesman pointed out that the session passed through a phase of introspection as well. It was stated that efforts should be made to democratise the information structure within the non-aligned countries and remove inadequacies.

The delegates also heard accounts of the working of regional co-operation in news exchange in Africa, West Asia, and other regions.

Problems raised by the information revolution in technology were gone into in another session by delegates in the context of the implications to developing countries and financial constraints. It was pointed out that communications technology accounted for 70 per cent of the economic activity in the west.

One of the participants suggested the need for a permanent body to monitor the developments in this technology with a view to protecting the interests of developing countries.

Another proposal was to create a fund of \$50 million to \$60 million for developing appropriate technology for third world countries. In this connection, delegates praised India's technological progress.

The list of participating countries, which the spokesman explained was not exhaustive, includes, apart from India, Afghanistan, Algeria, Angola, Bahrain, Bangladesh, Cuba, North Korea, Egypt, Ethiopia, Ghana, Indonesia, Iran, Jordan, Kuwait, Laos, Libya, Madagascar, Malaysia, Maldives, Mauritius, Nepal, Nicaragua, Nigeria, Oman, Pakistan, Palestine writers, Qatar, Rwanda, Senegal, Seychelles, Somalia, SWAPO, Sri Lanka, Surinam, Syria, Tunisia, Uganda, United Arab Emirates, Tanzania, Vietnam, Venezuela, North Yemen, South Yemen, Yugoslavia and Zambia.

The host country has the largest number of delegates (17) followed by Cuba (eight).

Earlier, addressing the plenary, Mr. G. Parthasarathy, who is also the chairman of the Indian Institute of Mass Communications, said that communication within a society or between societies could be both enslaving and liberating. It could serve to bring about conformity and to generate questioning and reflection. What was primary, therefore, was the content of communication, rather than its scale or its technology.

"Does communication promote human and cultural values, or is it an instrument of anti-humanist or fanatical beliefs or commercial interests? This is the acid test," he said.

Mr. Parthasarathy thought that as part of the striving for collective self-reliance in communication as in economic development, television and film banks could be built up. Each country could draw material of interest to it.

"We have made a beginning already with news exchanges that can grow eventually into a global news network among the non-aligned and developing countries."

At the same time, he emphasised, that a successful international pattern of co-operation in the field of information could evolve only if it was recognised that information system in each country should evolve according to its respective national genius and suited to the conditions prevalent in each country, within the framework of the value systems and culture in each society.

Secondly, he said, such co-operation had to be based on the recognition of the freedom of the media, the need for plurality of sources of information and independence of judgment.

In his view, the human factor, the concept of the "messenger" vis-a-vis the message, assumed utmost importance. "We should concentrate on providing training facilities and the development of manpower resources necessary to build up national communication systems, alongside the development of infra-structural facilities, technological inputs and other wherewithal", he said.

Mr. Mustapha Masmoudi (Tunisia) said the imbalances as well as the content of different news messages and cultural productions had not improved even after ten years of campaigning and discussion. On the contrary, "despite our urgent and impassioned pleas, the gap between the north and the south is constantly widening. This is the second truth."

The efforts made for greater comprehension, concessions granted and agreements concluded constituted a significant step forward but can in no way play the determining role required for bringing about desired changes.

At the same time, he said, the objectives assigned to NWICO in international forums, in particular UNESCO, could only be qualified as partial and provisional: "Consequently, we should avoid the trap of placing our objectives in a limited framework; we must take steps to widen their scope and make them more

meaningful so that they can harmonise the various facets of the dimensions of

P.T.I. adds:

Mr. Parthasarathy said developing countries should make use of the rich heritage of their traditional forms of expression--which are dramatic, tuneful, colourful and above all participatory--even as they avail of the possibilities of rapid and large-scale communication opened up by modern technology.

Audio and video cassettes, which might be gadgets for home entertainment in the industrially advanced countries, could serve "our societies as small-group media for localised communication," he said.

"We can also combine, innovatively, the use of traditional and modern modes of communication and not simply imitate the western models of mass communication."

He said the communications revolution of the last two centuries was in reality a revolution of techniques, and not a revaluation of values. "What is new about the print media, telegraph, telephone, phonograph, radio and television is the scale on which they are to communicate, be it entertainment for information."

India, he said, was emphasising not the development of communication hardware for its own sake but the development of communication content on indigenous lines, relevant to the conditions and needs of each country.

Mr. Parthasarathy said modern technology had both beneficial and harmful effects.

India, he said, had used the technology of satellite communication for bringing "the laughter of entertainment and the light of learning" to people in villages far remote from urban centres.

11 Dec Session Reported

Madras THE HINDU in English 12 Dec 83 p 9

[Text]

NEW DELHI, Dec. 11.

The emerging consensus at the deliberations of the conference of the media representatives from the non-aligned countries (NAMEDIA) today was towards rectification of imbalances in the global media network and democratisation of the communication structures within and between the non-aligned countries.

Participants in the NAMEDIA Sub-Commission on "Imbalances — retrospect and prospect" felt that equal emphasis needed to be placed on both aspects of the present day information order to establish a meaningful new information and communication order (NWICO).

In the Sub-Commission on new technologies, it was broadly agreed that the specific need of each developing society must be given priority before importing technologies from the rich countries. It was pointed out that most imported technologies catered to and grew out of the needs of the affluent societies while all third world countries were basically peasant-based.

Institutional set-up: An issue which came up in both the Sub-Commissions today was the proposal to set up a permanent body to follow up and lobby for the NWICO in the U.N. and other international forums. At the Sub-Commission on imbalances the proposal came in for sharp criticism from some delegates.

because it was felt that it would "diffuse" the energies of the already existing bodies like the Non-Aligned News Pool and professional bodies like the International Organisation of Journalists (IOJ).

One delegate felt that since most representatives of media organisations at the conference had no mandate to discuss the setting up of a new non-Governmental organisation (NGO) recognised by the U.N. the conference could not proceed on the matter.

Criticism of non-aligned news pool: The working of the non-aligned news pool also came in for some "constructive criticism." Most speakers stressed the need to professionalise its functioning to make it credible in the eyes of the media at large. It was said that the dissemination of news given by "official" agencies made it difficult to compete with transnational information agencies. A proposal to set up a coordinating committee to monitor its working and suggest improvements in the training of personnel in countries without national news agencies was also made.

'Gender inequality' in policies: An interesting resolution put forward by a women journalist emphasised that the communication policies of all third world countries, both capitalist and socialist, "bypassed" the "gender inequality" prevalent in these societies. Unless such policies provided equal access and participation to women, who constituted three-fourths of the illiterate in India, the new information order would be meaningless. She proposed special training courses for senior editors and policy-makers to "reorient" their thinking on the portrayal of women in the media.

Commitment to freedom: The contribution of the Indian delegation reflected the plurality of opinions on the approaches to establish NWICO. Some senior journalists felt that the conference should concentrate on redressing the global imbalances brought about by the transnational agencies. Others forcefully put forward the point that what was needed was "self-inspection" first, and a clear-cut commitment to "intellectual and media freedom" within the country. It was felt that a new domestic information order, which would emphasise the democratisation of the internal communication structures, both in terms of ownership and participation, should be spelt out.

'Subservience' of national media: Some Indian delegates also pointed to the "subservience" of major national media organisations to the concept of news disseminated by the transnational agencies. It was stated that the questions of war and peace and news items about the working class struggles were assiduously kept out of Indian newspapers. One delegate observed that the Indian media reflected the opinions of the transnational agencies even on commonly agreed non-aligned positions on Central America, Grenada and Palestine.

Reducing tariffs: In the Sub-Commission on new technologies, there was detailed discussion on reducing communication tariffs, making appropriate choices for the import of new technologies and setting up a system to exchange TV and radio programmes between non-aligned countries. Speakers called for a pooling of resources to develop a self-reliant technological base and to avoid duplication of efforts by allocating specific areas to individual countries. A special reference was made to the question of training media personnel to handle new technologies instead of resorting to retrenchment.

According to the conference spokesman, Mr. S. Viswan, the reports of the two Sub-Commissions would be finalised tomorrow and sent to the Rapporteur-General, who, along with the Chairman of two Sub-Commissions, would hammer out a final declaration. The drafting group, meanwhile, has had two inconclusive sessions.

Five resolutions: Five resolutions have so far been sent to the Drafting Committee for possible inclusion in the final document, he said. They pertain to the need for lowering communication tariffs, the need for appointing an expert group for assessing the impact of new technologies on media, continued media support to the Palestinian and other liberation struggles, the affirmation of support for women and other socially deprived sections of the society and the reaffirmation of support to the UNESCO and the Belgrade documents on media.

Earlier in the day, four special addresses were delivered by media personalities, including Prof. Yashpal, consultant to the Planning Commission, and film director Mrinal Sen at the plenary session.

Technologies flexible: Prof. Yashpal said that although the import of hardware communication equipment was expensive, technologies were flexible enough to design sub-systems suited to the specific needs of the poor countries. He described the operation of an inexpensive orbital postal and broadcasting system which could be set up with the expertise available in the third world nations. He said what was needed was a "vision" to apply the liberating possibilities of new technologies instead of being overawed by its complexities.

Information with social comment: Mr. Mrinal Sen made an impassioned plea for communication of information with social comment. His efforts, while making a film, he said, was to capture reality, "not only in its physicality, but on an understanding, based on ideological convictions". At a time when the non-aligned nations were "bound by a community of dangers", it was essential to assert its greatest resource — the ideological conviction, based on the dignity of man and equality of nations, he said.

Concluding Day's Session

Madras THE HINDU in English 13 Dec 83 p 9

[Text]

NEW DELHI, Dec. 12.

The four-day NAMEDIA conference ended today after adopting a stirring declaration, calling upon all media personnel in non-aligned countries to "raise above parochial loyalties and explore all possible avenues for promoting the cause of peace, freedom and justice."

It urged them to intensify their endeavours towards the establishment of an equitable world order of which a new international economic order (NIEO) and a new international information and communication order (NICO) were essential parts.

The concluding plenary session also unanimously adopted two reports of the commissions on "Imbalances — retrospect and prospect" and on "Technologies — challenges and opportunities", eight resolutions on specific international and communication issues and the rapporteur-general's final reports. In all 98 delegates from 45 countries, PLO, SWAPO, the African National Congress and representatives from six U.N. organisations and professional bodies attended the conference.

Battle to be won in minds of men: The declaration made it clear that the battle for a new order had "to be fought and won in the minds of men, in which the role of media was of crucial importance." But this global struggle for equality and justice had "a domestic dimension also", it pointed out. "Non-aligned countries can and must do much more than they have done so far to increase the flow of information among their own people and among the non-aligned countries", the declaration observed.

Facing up to Western dominance: In this connection, it urged media professionals in non-aligned countries to seek not only to correct the imbalances produced by the dominance of the Western media, "but also strive for widening the areas of freedom in their own countries."

The report of the commission on "imbalances", which was presented by Mr. N. Ram, said the debate centred on what content should be imparted to the concept of a new international information order (NICO), the steps that have been taken and need to be taken to achieve its objectives.

The points on which there was complete agreement among the delegates were that bulk of the information flowed in one direction from the Western industrialised nations to the developing countries, most of which were former colonies; the imbalances which were both quantitative and qualitative also existed within and among the non-aligned countries; the disparities in the access to technology reinforced the imbalances in information flow and that information was distorted by the world views held in Western industrialised countries where the information agencies were based.

Friction over follow-up: But the issue over which the most divergent opinions were expressed was on the question of what form

NAMEDIA should take to follow up the measures recommended at the conference. The reports said that some delegates expressed the apprehension that the body constituted in whatever form "might duplicate or multiply institutions without improving the information of news flows." It was also feared that it could become a bureaucracy-ridden organisation. However, it was widely recognised that the campaign to promote the cause of NICO before UNESCO and other international fora must be continued.

The general opinion on the functioning of the non-aligned news pool was that it "constituted a positive step" towards developing an exchange of information, but the attitude of the major media in non-aligned countries came in for criticism. It was suggested that one way of strengthening the pool would be to make wider use of it.

Corrective steps: Some of the suggestions to improve the communication structures within the non-aligned countries include: the elimination of all constraints on media where they were imposed by governments or private owners; the promotion of multilateral exchanges between the non-aligned countries and the need to strengthen the credibility, professional competence and technological base of information agencies in the non-aligned countries.

Technologies with safeguards: The report of the commission on technologies presented by Mr. D. R. Menkelar emphasised the need for non-aligned countries to adopt appropriate new technologies with safeguards which minimised social and cultural disruption in their societies. It pointed out that the new means of gathering, storing and disseminating information had changed the complexion of economic activities and upset the normal factors affecting developing economies.

It was suggested that a permanent committee be set up to monitor technical developments and their effects on developing countries and suggest measures to protect the interests of these countries.

Broadcasting monopoly: Most speakers also emphasised the need to have a common position on the direction of geostationary orbits and radio frequency spectrum so that these resources were available to them on the basis of equity and justice. They rejected the "protection of existing services" of short wave radio band by the rich countries "as this would shut out forever further access to this band by developing countries."

Of the resolutions adopted, one on the reduction of telecommunication tariff was directed towards governments of non-aligned countries. It urged them to introduce immediately the concessional press bulletin and development press bulletin services for teleprinter and voice grade channel, "without which communication infrastructure in developing countries cannot be strengthened."

Support for struggles: The other resolutions reaffirmed support to the liberation struggles in Southern Africa and to the PLO and drew the attention of the non-aligned media to the threat of nuclear war, confronting the world today, especially as a result of the Reagan Administration's aggressive postures.

Another resolution passed unanimously said NICO would remain inadequate unless all socially disadvantaged social groups, especially women, were given equal access to information and participation in the communication process.

CSO: 5500/7071

INDIA LAGS AS COMMUNICATIONS YEAR ENDS

Bombay THE TIMES OF INDIA in English 5 Dec 83 p 20

[Text]

NEW DELHI, December 4.

THE world communications year is to end in a few weeks without the Indian system being able to make any significant breakthrough in meeting demands or improving the quality of service.

If the series of special studies and discussions during the year have achieved anything, it is to create awareness on imperatives of massive investment. Technocrats, businessmen and administrators agree that the national economy is in desperate need of better telecom system.

To preserve the present level of efficiency, telecom engineers maintain Rs. 950 crores need to be invested in just four cities — Bombay, Calcutta, Delhi and Madras. This will not take care of any expansion of services in these cities which together account for one-third of the total telephone channels.

Working connections at the beginning of the year numbered 2.3 million. The year closes with 635,000 applicants on the waiting list. Next year the demand will go up by 3.7 million. The present programme will leave the end of 1984 with 689,000 on the waiting list.

The paradox of the situation is that while waiting lists have continuously lengthened to lakhs and the return on telecom investment had also gone up from 13.8 per cent to 21.71 per cent in a decade, the sectoral share of investment had been hardly commensurate with either the existing need or the projected demand. Its relevance to totality of progress was not reflected in the outlay.

Other developing countries have done better in this regard. A World Bank study points to telecom investment in India 0.17 per cent of GDP.

This is just about half of the average (0.34 per cent) of the developing countries together. The figures of some other third world countries include Burma: 0.23 Malaysia 0.34 and Singapore 0.53.

The International Telecommunication Union places India telephone density at 0.29 per cent of the population. Inevitably, this disparity in a basic infrastructure has been a thing constraint.

In acknowledgement of this reality, the Prime Minister, Mrs. Indira Gandhi, has reportedly asked the planning commission to consider if P and T could be considered the core sector.

The communications minister, Mr. V. N. Gadgil, himself says: "Whenever I have visited rural areas, the first thing people ask for is telephones (not even post offices)." This could be appreciated in the context of a rural study on the trips a farmer makes to a fertilizer distribution centre and percentage of unsuccessful trips which could be avoided if there was a telephone facility. The figures for various states are: Haryana — 22, Punjab—55, Bihar—39, Gujarat — 48, Maharashtra — 45, Andhra Pradesh — 44 and Tamil Nadu — 64.

Of course, in urban areas pressure on the existing network is intense. A minimum of eight to 15 calls are made in India per telephone per day against only three to four calls in telephone-wise satisfied countries. For that reason investment has not been for improvement of service but for adding telephones.

MORE FUNDS NEEDED

Similarly, even the additional resources from the periodic increase in tariffs had gone to meet the increases in expenditure on staff or deficits on postal services (for the year 1982-83 the postal deficit is around Rs. 90 crores).

Additional funds are called for upgrading cable construction methods so that the colossal telephone failures during rainy season could cease. More money is needed to enable buying more equipment to remove congestion in trunk and local telephone networks. The congestion necessitates several attempts for each call.

While the call completion rate in a telephone-wise satisfied country can be as high as 70 per cent, it can be as low as 20 per cent in the larger telephone systems here because of lower investment.

The Indian Telecommunication Service Association, in a detailed note, has set forth perspectives and problems. "Although invested with the responsibility of providing telephone services we find ourselves under severe constraints even for choosing the technology we deem to be most appropriate. We are not free to have a personnel policy in tune with the type of technology (which is the basis of our service). We are not able to adopt the methods required by the volume and pattern of work. We continue to have the same manual methods of handling 20,000 trunk calls a day as we were having for 1,000 calls per day."

SEPARATE BOARD

In the view of the association, the first and foremost pre-requisite to improve performance and implement future programmes is the appropriateness of the organisation. The Administrative Reforms Commission and the Sarva committees had held that telecommunications should be constituted in a separate board. Professionalism and technical wisdom will have to be brought to bear upon the problems to evolve a strategic plan and tactical implementation method.

The association claims that level of available expertise in Indian telecommunication service is high and many among them have served as international experts upgrading or establishing new networks abroad. Still, they find themselves unable to give a satisfactory telephone service within the country. "We believe that it is because of the system inadequacy and organisational constraints. Unless these are changed the first step for improvement would not have been even taken."

The situation inevitably calls for new measures, new systems and a new philosophy in the telecommunications organisation. A welcome contribution of the communications year is the beginning of a continuing concern and search for a better system.

FOURFOLD RISE IN TV STATIONS LIKELY BY 1985

New Delhi PATRIOT in English 5 Dec 83 p 7

[Text] LUCKNOW, Dec 4 (PTI)--The strength of the TV relaying and transmitting centres in the country would go up to 183 by the end of the next year as against the existing strength of 43.

Stating this at a news conference here today Information and Broadcasting Minister K H L Bhagat said with the increase in the network of TV stations, the number of TV viewers would go up to 70 per cent as against the existing 23 per cent.

The expansion and development work of the TV would entail an estimated expenditure of over Rs 284 crore in three phases during the Sixth Plan period. Most of the expenditure would be on hardware of the TV, Mr Bhagat said.

Mr Bhagat said the expansion to be done during the next year would be 'unprecedented' and would be colour based. All future planning would be colour-based he added.

Asansol, Vijayawada and Trivandrum would have intern operation of TV transmitters of one KW each by the end of the current year or in the beginning of the next year. Gwalior too would have 100 watts, he said.

Mr Bhagat said Uttar Pradesh would have 23 transmitters during the Sixth Plan period. Seven of them would be high power transmitters of 10 KW each and the remaining sixteen watts each high power transmitters would be situated at Lucknow, Kanpur, Allahabad Varanasi, Gorakhpur, Agra and Mussorie while low transmitters would be set up at Deoria Bareilly Moradabad, Aligarh, Jhansi, Sultanpur, Raebareli, Faizabad, Behraich, Shahjehanpur, Farrukhabad, Sambal, Rampur, Pauri Nainital and Etawah.

CSO: 5500/7064

BRIEFS

DATA COMMUNICATIONS NETWORK--BOMBAY, December 9: A data communication network designed "Indonet", will soon be set up to utilise optimally the computer resources, said Dr. M. S. Sanjeevi Rao, Union deputy minister for Communications, and chairman of the electronics commission, here today. Delivering the keynote address at the national seminar on "Telecommunications," organised jointly by the Bombay Telephones and the western council of the Indo-American chamber of commerce, to commemorate the world communications day, Dr. Rao said, that the components and equipment for the network would be manufactured indigenously. The minister also spoke on the plans to indigenously develop digital switching system, constituting the heart of the new communication technology. He said the modern telecommunication technology was endeavouring to incorporate more and more components on a single wafer, and to realise the dream of having a telephone exchange on a tiny chip. Dr. Rao also mentioned the contribution of telecommunications to the field of education, agriculture and medicine. Mr. V. N. Gadgil, Union communications minister, who was to have inaugurated the seminar could not be come. He was represented by the secretary in his ministry, Mr. K. Thomas Kora. Mr. Kora said that telecommunications had become an international enterprise, and was a booming proposition. It brought people and countries together and promoted trade and commerce. Mr. H. R. Prasad, president of the chamber, welcoming the guests, said the agricultural sector contributed 40 per cent of the country's GNP and involved 500 million people. Yet this sector had only 7 per cent of the country's telephones. [Text] [Bombay THE TIMES OF INDIA in English 10 Dec 83 p 3]

SATELLITE MONITORING PLANS--AURANGABAD, Dec. 11.--The Centre will set up a Rs 3.5-crore satellite monitoring station at Indeevadi in Maharashtra's Jalna district, reports UNI. Announcing this, the Minister of State for Communications, Mr V. N. Gadgil, said today the station, first of its kind in South-east Asia, would monitor services based on the Indian National Satellite. He was speaking at a function organized by the Maharashtra State Marketing Federation. [Text] [Calcutta THE STATESMAN in English 12 Dec 83 p 9]

BOLPUR MICROWAVE SYSTEM--A microwave system has recently been commissioned between Bolpur and Asansol to provide trunk services in the area, according to a PIB release in Calcutta on Friday. A few trunk circuits had already been extended through this system to meet the needs of communication during the convocation and other functions of Visva-Bharati University. About 1,000

telephones in 31, 32, 33 and 34 exchange of the Burrabazar area had gone out of order because of damage caused in the underground cables by different agencies, the release added. The affected area includes Battala Street, Kalakar Street, R. K. Rakshit Lane and Sovaram Basak Street. [Text]
[Calcutta THE STATESMAN in English 17 Dec 83 p 16]

COOPERATION WITH ITALY--The Indian Telephone Industries Limited (ITI), Bangalore, signed a collaboration agreement with Face Standard of Italy recently for the manufacture of the face design of telephone instruments in the country, reports PTI. This design has been chosen for manufacture after a series of laboratory evaluation tests. Mr K K Rao, director Finance, ITI and Mr Giorgio Daniele, sales manager of Face, signed the agreement on behalf of two organisations. The investment proposals of the ITI for modernising the telephone manufacturing plants in Bangalore and Naini at a total cost of Rs 18 crores have been cleared. As a result of this agreement with Italy, the ITI will produce telephone instruments with a rotary dial of the FACE design immediately. Provision also exists for the manufacture of telephone instruments with push button dials. The Bangalore and Naini units will turn out annually five lakh instruments each by 1987-88. The srinagar unit at present assembling 100,000 telephones from components and sub-systems manufactured elsewhere, will have manufacturing capabilities for producing 100,000 instruments per year as a result of this collaboration. [Text] [New Delhi PATRIOT in English 19 Dec 83 p 5]

CSO: 5500/7070

PESHAWAR TO HAVE MICROWAVE LINK WITH CHITRAL

GF101341 Rawalpindi PAKISTAN TIMES in English 22 Dec 83 p 7

[Article by Khawja M. Iftikhar]

[Excerpt] Islamabad, 21 Dec--Pakistan's telecommunication engineers have completed laying of Rs 100 million microwave link between Chitral and Peshawar 10 months ahead of schedule. The microwave link which will provide reliable communication facilities to the land-locked population of Chitral and Dir Districts will also benefit the Swat Valley.

The microwave link will replace the age-old open wire system in Chitral and Dir as well as temporary ultra high frequency (UHF) system now linking Mingora with Peshawar.

The high capacity microwave system with main and standby facilities which will be commissioned soon will provide 960 telephone channels, besides TV channels.

The system provides the foundation for giving Chitral and Dir direct NWD [expansion unknown] facility, which is planned for the current 5-year plan. Daroosh Timmergara (Dir's district headquarters), Bahor Agency Butkhella, Chakdara and a number of other towns in these three districts will also be linked with this microwave system in a phased programme.

The most difficult task in laying the microwave link was the installation of a reflector on 12,000 feet high Lowari Top which is inaccessible. The impassable site of the reflector is located in the Hinduraj Range--a branch of the mighty Himalayas, which remains snow-bound from December to June.

Solar Energy: Use of solar energy to charge repeater station batteries at Lowari village is another prominent feature of the project. To save on diesel for station's power generator, the standard option was to ask WAPDA [Water and Power Development Authority] to provide approximately 23 kms long 11 KV line from Dir to this place. This in itself was costly so the designers had no option but to discard it. The project leader, Engineer Arjumand A. Sheikh, who has his credentials in solar energy at international level decided to make use of solar system as one of the

alternatives. These solar panels would provide power to station batteries during sunny periods. Only during cloudy days or at nights will the diesel generator be used. Its switching on and off will be automatic. This means not only considerable savings in installation costs but also increased operational reliability.

Fault Direction: The whole system is supported with remote sensing fault detection and correction device placed at Peshawar, Mardan, Mingora and Chitral. If a fault occurs at any of the hops, concerned staff will come to know of it immediately, and will be able to take corrective measures.

CSO: 5500/4709

ADVANCES IN OPTICAL COMMUNICATIONS REPORTED

HK101046 Beijing BEIJING RIBAO in Chinese 23 Dec 83 p 1

[Report by reporter Liu Tingzhao: "Beijing's First Optical Fiber Communication Line has Worked Well for 50 Months"]

[Text] A pair of optical fibers, which measure 3.3 kilometers long and are smaller than a hair in breadth and are functioning as a telephone communication line consisting of 120 pairs of wire, have been working efficiently for 50 months in the communications network between Beijing Bureaus Nos 86 and 89.

This optical fiber communication line was the first of its kind officially put into operation in Beijing in October 1979 (on a trial basis at the beginning), only 2 years after the world's first communications line of the same type was put into operation in the United States.

Officially merged into the communications network in February 1981, this optical fiber communications line guarantees round-the-clock smooth operation of the telephone relay trunk of 120 lines. It has functioned well without mishap in the past 4 years and more, ensuring distinctive communication, and is highly resistant to corrosion and electromagnetic interference, and is efficiently maintaining secrecy.

A comrade of the Beijing Glass Research Institute, one of the units engaged in the study and making of the optical fiber communications line between Bureaus Nos 86 and 89, told the reporter: To further widen the scope of optical fiber use in communications, the research institute has supplied, since the beginning of this year, optical fibers or cables to a certain ground satellite receiving terminal, the Beijing electronic computer center, and other organizations. Its work of studying and making optical fiber has entered the stage of a pilot test. Working in cooperation with other units, it is now capable of producing 100 kilometers of optical cable a year. The director of the research institute excitedly told the reporter: "The work on the optical fiber communications line between Bureaus Nos 86 and 89 was carried out by hand years ago. At present, computer control has been brought into effect. The quality of optical fiber produced in Beijing has attained the quality level of optical fibers exported by the United States and Japan. Beijing has become rather advanced at home in the production of optical fiber."

CSO: 5500/4157

DEVELOPMENT OF CHINA'S COMMUNICATION INDUSTRY HIGHLIGHTED

Beijing DIANZI XUEBAO /ACTA ELECTRONICA SINICA/ in Chinese No 5, 1983 pp 99-103

/Article by Lai Guozhu /0171 0948 2691/ of the Communication and Broadcasts TV Bureau of the Ministry of Electronics Industry/

/Excerpts/ I. Achievements and Deficiencies of China's Communications Development

At the time of the liberation, China had only 31,000 local switching units, 33,000 telephone sets and 2,800 long-distance telephone lines, with a total distance of 77,000 km. All the carrier equipment, automatic switching units and teletypewriters were imported and the technologies at that time were rather backward.

Since the People's Republic was established, both the party and the government have been concerned about the development of the communication industry. After more than 30 years of dedicated effort, China has developed the capability of building its own telephone sets, switching units, carrier equipment, teletypewriters, facsimile telegraph machines, radio stations (from ultralong wave to microwave), scattering communication equipment, satellite communication equipment, data communication equipment and optical fiber communication equipment. China has established within its territory a basic postal and telecommunications network and special communication networks for railroad, hydropower, broadcasting, petroleum, transportation and military applications. In terms of the postal and telecommunications network, by the end of 1981 there were 2.17 million urban switching units, 2.45 million rural switching units and 24,000 long-distance lines, and 95 percent of the communes were equipped with telephones. In addition, 14,000 km of microwave circuits have been built to allow transmissions of telephone messages, newspaper facsimiles and television programs among 26 provinces and cities. Through satellite ground stations and international communication satellites, we can have direct telephone and telegraph links with 45 other countries and regions and exchange television programs with major countries on 5 continents. These are significant achievements, but compared with the industrialized nations, our country with a population of 1 billion, is still far behind both in terms of the quantity of communication equipment and circuits and in terms of technical standards and the quality of service. We are still far from meeting the requirements of the four modernizations. The following statistics will further illustrate this problem.

1. In terms of the "telephone availability index" (i.e., the number of telephone sets per 100 persons), which is an important measure of a country's level of communications development, China has one of the lowest availability indexes in the world, comparable to that of India and Indonesia (see Table 1, based on 1981 statistics).

Table 1. Comparison of Telephone Availability Index of Nine Countries

<u>Country</u>	<u>Availability (%)</u>
1. The United States	83.7
2. Great Britain	49.7
3. France	45.8
4. Japan	49.4
5. Italy	31.8
6. Soviet Union	8.9
7. India	0.43
8. China	0.43
9. Indonesia	0.3

2. At present, the standard of manufacturing technology in China's communication industry, except for certain products, is generally 15-20 years behind that of the developed nations. For example, medium and small coaxial carrier equipment, crossbar automatic switching equipment, teletype machines and many pieces of radio communication equipment in this country are equivalent to a level of the international standards of the 1960's.

3. In terms of the quality of service, due to the shortage of long-distance communication lines, the delayed-connect system (which requires a long connect time) is still being used today. In other countries this mode of operation is almost extinct. (The United States began using the immediate-connect system in 1927, which reduced the waiting time to 1-2 minutes. In recent years, many countries have implemented direct-dialing long-distance calls, thus making waiting time of long-distance calls identical to that of local calls.) In the area of intracity telephone service, there is a severe shortage of trunk lines, but the small switching units of businesses and offices have disproportionately large capacities, and hence the connect rate of local telephone calls is also very low. Undoubtedly, various activities are adversely affected by the poor service.

In China, approximately 25,000 km of analog microwave relay lines have been built as part of the public and dedicated communication networks; they use the 960-channel system (the 1800-channel system is still being tested). A limited number of 30-channel and 120-channel digital microwave relay systems has been implemented; the 6-GHz, 480-channel digital microwave system, which includes complete facilities of the solar-powered, 2-GHz, low-consumption unmanned station, has also been developed and will be mass-produced in the near future. This marks a new era of China's technology in the design and production of a microwave relay communication system. Based on China's current situation, the appropriate strategy is to utilize fully the 5,000 km of existing analog microwave relay lines and to develop both analog and digital technologies for a limited

period in the immediate future. However, due to the financial community's urgent demand to establish an integrated digital communication network, there is little doubt that the pace of development of digital microwave relay communication will exceed that of analog communication.

China began its research and development of digital communication at a fairly early stage, but its application to the national economy did not take place until recently. In 1973, the State Council approved a plan to develop a national computer network for the purpose of improving the management of the national economy and increasing economic benefits. In recent years, with improved conditions in communication lines and increased standards in software technology, a number of agencies have made definite progress toward establishing a digital communication network. For example, the Institute of Mathematics of the Chinese Academy of Sciences used an imported FELIX C-512 computer to set up a computer network by linking more than 10 terminals at other institutes of the academy. Within the past 2 years, it has attracted more than 600 users to set up accounts, and currently it is operating 12-15 hours per day. Although these computers are not advanced models, they nevertheless can make significant contributions and can provide increased economic benefits.

However, from the standpoint of the range of applications, China's digital communication industry is probably still at a level comparable to the international standard of the early 1960's, and is progressing at a rather slow pace. The main reasons for this situation can be summarized as follows: (1) it is still difficult to produce on a large scale high-quality, low-cost communication circuits; (2) the essential components of a digital communication network, which include digital switching units, interface equipment (e.g., digital program-controlled switching equipment, communication control units, modulators and demodulators) and digital terminals (particularly Chinese-character terminals with high reliability), are presently not available; and (3) China was lagging behind in the research and development of communication software and various data bases shared by members of the network.

Now, the government is devoting a great deal of effort to the development of electronic computers; it has established a State Council committee on electronic computers and large-scale, integrated circuits, headed by Vice Premier Wan Li. With the continued development of China's electronic communication industry and the improved conditions of the communication lines, the technology and application of China's digital communication service will soon enter a new era.

III. Some Ideas on the Development of China's Communication Industry

The communication industry is an important part of the electronics industry; it also provides the technical facilities for the whole economy. Development of the communication industry is closely related to the development of communication service. Therefore, while making a concerted effort to build up communication service, it is necessary also to consider improving and building up the communication industry. Some practical ideas along this line are summarized below:

1. First, we must perform technological and economic analyses by taking a broad perspective. We should study the beneficial experiences of advanced nations and review China's current situation in order to solve the problems of planning a nationwide communication network and establishing a technical system and a supply system for the network. Accomplishing this task will avoid pitfalls and unnecessary financial losses.

2. We must accelerate the research and development of new products by importing advanced technologies from abroad. The importation of technologies should be accomplished as part of the trade activities under a unified national policy. The industrial ministries should introduce reforms to a selected number of key communication organizations in order to accelerate the research and development of new communication equipment.

3. We must also concentrate our efforts on the development of new communication components. The technical requirements imposed on the components by modern digital communication equipment are as demanding as those imposed by computers. The required components include high-performance microwave and millimeter-wave equipment, optical communication devices, optical fiber and optical cables as well as acoustic surface wave devices and magnetic devices. Arrangements should be made by the government to ensure high priority in these development efforts.

4. We must emphasize the cultivation and training of technical personnel. Economic growth depends on advances in science and technology; a key issue in making scientific and technological progress is for those in leadership positions to discover, promote, utilize and cultivate talented people. It is the author's opinion that those agencies with a good source of qualified people should devote special attention to this problem.

5. We must address the problem of inadequate capital. China's communication industry has a rather weak foundation and poor technical facilities. We cannot rely on the communication industry itself to accumulate the necessary capital to improve current conditions and develop new technologies. The result will be an even wider technological gap. It is suggested that the government provide an appropriate amount of financial assistance (it is alleged that the United States Government invested \$11.6 billion in just communications research during the 3-year period from 1978 to 1980) and at the same time explore various ways of raising capital.

6. We must establish and carry out protective policies which are favorable to the development of China's communication industry. Such policies would promote China's long-term interest and benefit both the communication service and the communication industry.

7. A reform in China's current communication management system is required. It is the author's opinion that at the present time, many deficiencies exist in research, production, construction and utilization of China's communication industry, which are clearly undesirable for the government's effort in overall and unified planning. The basic problem is the management system. The pace of development of China's communication industry will depend to a large extent on the degree of reform of the management system.

PRC EXPANDS MICROWAVE TELECOMMUNICATIONS

OWO31035 Beijing XINHUA Domestic Service in Chinese 0010 GMT 3 Jan 84

[By Reporters Ji Naifu, Wu Jincal]

[Excerpts] Beijing, 3 January (XINHUA)--The development of microwave technology has greatly speeded up information transmission in China.

People in Guangzhou, Kunming, Lanzhou, Chengdu, and other cities, which are several thousand li from Beijing, are able to read RENMIN RIBAO of the same day much earlier than before. Central Television Station programs can be transmitted to 26 provinces, municipalities, and autonomous regions for broadcast to the local viewers through relay stations. Radio programs of the Central People's Broadcast Station can also be broadcast to more than 20 provinces, municipalities, and autonomous regions through microwave. In several dozen major Chinese cities, several thousand people can make long distance calls to other cities simultaneously. In addition to these benefits, microwave telecommunications have numerous other noteworthy uses as well.

By the end of 1980, after more than a decade of effort, China's telecommunications departments had set up a fairly complete network of microwave lines for domestic use. With Beijing as its center, this network consists of a number of microwave lines totaling more than 1,000 km and, with the exception of Urumqi and Lhasa, connecting all provincial and regional capitals, municipalities, and a number of medium-sized cities. The Hohhot radio and television microwave line set up by Nei Monggol Autonomous Region has also been connected with the state microwave network. Microwave has become a major means of transmission for China's telecommunications departments. The Beijing Telegram Bureau recently increased the number of newspapers for microwave facsimile from six to nine. Microwave technology will bring even more benefits to the Chinese people in radio and television broadcast and telephone communications.

CSO: 5500/4156

BRIEFS

FUZHOU-GUANGZHOU COAXIAL CABLE--(By our reporter Luo Yuchao and correspondent Gu Jinhuang) The Ministry of Post and Telecommunications has decided to lay the Fuzhou-Guangzhou small-diameter coaxial long-distance communications cable, so as to improve the communications link between Fujian and Guangdong Provinces. Preparations for the construction of this project are in full swing, and construction work on the Xiamen-Shantou section started recently. When completed, this long-distance communications cable will link Beijing, Shanghai and Hangzhou with the Beijing-Wuhan-Guangzhou intermediate cable, which is still under construction. When this project is in full operation, like making telephone calls within a city, telephone calls can be made through automatic dialing from Guangzhou to such large cities as Beijing, Shanghai, Hangzhou, Tianjin, Zhengzhou, Wuhan, Changsha and Fuzhou. [Text] [Guangzhou NANFANG RIBAO in Chinese 25 Dec 83 p 1]

FUZHOU-HANGZHOU CABLE LINE--By our correspondent--With the approval of the State Planning Commission and the Ministry of Post and Telecommunications, the Fuzhou to Hangzhou small-diameter coaxial long-distance underground cable project was started during the first 10 days of December. This underground cable project is 766 kilometers in length and traverses 21 counties and municipalities in Fujian and Zhejiang Provinces. The project work is divided between the post and telecommunications departments of these two provinces. The total investment is 45 million yuan. The project is scheduled for completion in 1986. This small-diameter coaxial cable can link three 300- or 396-circuit carrier telephone systems. Upon completion, this project will substantially ease the tense situation in the outgoing long-distance communications to better serve the economic construction programs in Fujian and Zhejiang Provinces.

ZHEJIANG MICROWAVE RADIO RECEIVER--The Zhejiang Provincial Radio Station recently set up a microwave receiving station in Hangzhou. It can receive the No 1 and No 2 programs of the Central People's Broadcasting Station from Beijing through microwaves. This station will relay the Central People's Broadcasting Station's No 1 program on 1359 KHZ and No 2 program on 630 KHZ. [Summary] [Hangzhou Zhejiang Provincial Service in Mandarin 1030 GMT 24 Dec 83 OW]

NEI MONGGOL MICROWAVE TRANSMISSION LINE--A radio and TV microwave transmission line between Hohhot and (Daihankela) Town, Nei Monggol Autonomous Region, has been established. The transmission line is 600 li in length. [Summary] [Hohhot Nei Monggol Regional Service in Mandarin 1100 GMT 26 Dec 83 SK]

CENTRAL TELEVISION STATION RELAY--From 2 January 1984, the Guangdong Television Station will use channel 8 and channel 14 to relay the day programs of the Central Television Station. The broadcasting time of channel 8 will be from 1200 to 1300 [0400-0500 GMT] everyday and the broadcasting time of channel 14 will be from 1530 to 1630 [0730-0830 GMT] everyday. The program from 0830 to 1130 [0030-0330 GMT] on Sunday will be extended to 1300 [0500 GMT]. [Text] [HK310744 Guangzhou Guangdong Provincial Service in Cantonese 0300 GMT 30 Dec 83]

CSO: 5500/4156

DEVELOPMENT AND USE OF TELECOMMUNICATIONS DISCUSSED

Prague TELEKOMUNIKACE in Czech No 10, 1983 pp 145-146

[Article by Ivan Lazorik, deputy minister of communications, CSSR: "Development and Utilization of Communications Facilities and Capacities"]

[Text] The demand and requirements for communications services in our socialist society recorded a rapid growth in recent times. This applies particularly to telecommunications where, in addition to increased interest in telephone service, there was the goal to increase automation of long-distance telephone communications in accordance with the conclusions of the 14th and 15th CPCZ Congresses. Similarly, the goal in radio communications was to expand and improve the transmission of radio and television signals gradually over the entire CSSR territory.

This also required expanding the technical operational communications base. This dynamic development of communications was particularly manifested during the last two 5-year plans in considerably increased amounts of basic equipment. In this way incomparably better conditions were set up for more rapid, effective and better satisfaction of the needs of all users of communications services and requirements, both in the national economy and the population.

In the course of the last two 5-year plans the financial measure of the basic equipment of the department of communications increased 114.50 percent, and by the end of 1980 its value amounted to Kcs 35.5 billion.

Not all types of basic equipment increased uniformly. The goals and objectives of investment operations placed emphasis primarily on the development of those technical operational facilities that would contribute in the greatest part and to the greatest extent to the main activity of communications, that is, the creation of conditions to satisfy the needs and requirements for telecommunications and radio communications operations and performance.

The greatest development and greatest accretion of basic equipment were attained:

--in construction, that is, the extension of low voltage and high voltage cable lines, in building radio and television transmitters, in constructing surface and underground installations, poles, towers, etc. The value of these facilities increased by Kcs 6.3 billion or 86.8 percent, to the sum of Kcs 13.5 billion;

--in apparatus and special technical equipment, that is, facilities for telecommunications and radio communications, measuring instruments and such, where the value increased by Kcs 7.2 billion or 133.6 percent, to the sum of Kcs 12.7 billion;

--for the construction of buildings for technical equipment and technical operational requirements where investment in additional installations and buildings rendered operational came to Kcs 4 billion, that is, the value of these basic facilities increased 144.9 percent to the sum of Kcs 6.8 billion;

--in expanding power and driving machinery and equipment, that is, power units, storage batteries, condensers, rectifiers, distributors, electric motors, rotary suppliers of current, transformers, assemblies, pumps, compressors, industrial air and cooling equipment, etc. Equipment put into operation came to Kcs 362 million. Their value increased 200 percent, to the amount of Kcs 544 million;

--in expanding the vehicular fleet, where the value of means of transportation increased by Kcs 600 million, that is, 82.9 percent, to the sum of Kcs 1.3 billion.

Providing basic equipment for one worker increased from Kcs 166,500 to Kcs 310,500 or 86.5 percent.

Carefully planned development of the technical operational base, systematic attention to and concern for timely completion of individual investment projects and seeing that these capacities and facilities were first-rate when rendered operational helped increase the volume and value of basic equipment during the Fifth and Sixth 5-Year Plans by Kcs 18.9 billion.

The Ministry of Communications was enabled gradually to expand its technical operational base, which is shown also by the added capacities achieved in telecommunications and radio communications.

For example:

--The number of lines in the capacities of public dial telephone exchanges rose by 813,887 lines--an increase of 71 percent, to a total of 1,960,824 lines.

--The number of km/pairs in local communications networks increased by 2,547,524, that is, 92.5 percent, to a total of 5,320,540 km/pairs.

--The number of km/pairs of long-distance or trunk communications cables was increased by 469,207, that is, 42 percent, to a total of 1,585,804 km/pairs.

--The number of main telephone stations was increased by 640,363 and at the end of 1980 1,648,696 main telephone stations were in operation, that is, an increase of 63.5 percent.

--The network of basic, supplementary and auxiliary transmitters for dissemination of TV Program 1 was expanded by four to a total of 34. The goals and

objectives for the TV Program 1 time segment were chiefly aimed at improving quality and covering the territory of the republic with a good quality signal. Consequently, the network of converters was expanded from 571 to 945, that is, by 374 converters.

--In order to provide the technical and transmitter base for the dissemination of TV Program 2, a network of 56 transmitters and 140 converters was built up in the course of the Fifth and Sixth 5-Year Plans.

--In order to improve and extend audibility and provide better coverage of the territory of the republic with quality radio signals, resources were directed toward the renovation and modernization of radio transmitters and increased performance, especially the longwave radio transmitters in Kosice and Topolna. At the present time the Communications Ministry provides propagation of radio programs by 706 transmitters, of which 8 are KV [shortwave], 57 SV [medium wave], 2 DV [longwave] and 39 VKV [UHF].

These and other capacities, including expansion of automated telecommunications operations, enabled the Ministry of Communications to satisfy most of the requirements of those using communications services. The following facts, among other results, attest to this:

--The number of local calls, including pulses of long-distance calls effected automatically, increased by 1,769 billion calls as compared with 1970, that is, the intensity of telephone communications increased 109 percent and in 1980 there were as many as 3,391 billion calls.

--The Ministry of Communications provided more rapid expansion of the teletype subscriber network and the number of subscribers to the telex system rose from 4,067 to 10,027 or a full 117 percent.

--The number of public pay stations increased to 9,716.

--Consumer demand for communications services increased considerably and their volume reached the amount of Kcs 13.4 billion, while services provided by telephone, telegraph, teletype, wire broadcasting, for transmission of data, for operation of radio and TV transmission facilities amounted to more than Kcs 8.7 billion or 64.9 percent of the total output of the Ministry of Communications.

--The development of technical operational facilities also helped increase the number of licensees: The number in radio increased by 908,502 (+28.6 percent) to 4,082,155; the number in television increased by 1,200,390 (+38.8 percent) to 4,291,633 licensees by the end of 1980. During this time, however, the number of subscribers to wire broadcasting dropped by 74,243; by the end of 1980 there were 611,047 subscribers.

These capacities built and put into operation and their rapid growth through automation brings up the question: How are they actually used?

--We cannot overlook the fact that, for example, from 1970 to 1982 the number of main telephone stations was increased by 712,046 and the capacity of automated public telephone exchanges was expanded by 947,437 lines so that their utilization was at 75.54 percent.

We cannot lose sight of the fact that the degree of use of the capacities built and put into operation is not optimal, for example:

--the capacity of teletype exchanges is used at 73.55 percent;

--the capacity of automatic branch exchanges at 82.48 percent;

--the capacity for connecting long-distance circuits in long-distance telephone exchanges at 57.95 percent.

Some of the results noted in the use of technical operational capacities in the whole department indicate that there is unused capacity and an imbalance among individual technical operational facilities (cable networks and exchange capacities, etc) and that the communications department must see to more efficient and optimal use of existing capacities in satisfying the needs and demand of the national economy and population in the area of telephony. With systematic reduction in the extent of investing, this is the only proper way, since, for example, by increasing the utilization of existing capacities (lines) to 80 percent, at least 93,000 lines would be available, which represents Kcs 280 million in investment capital and more than Kcs 22 million reduction in value.

It is true that since 1979 conditions in the telephony sector have been more difficult because of adjustments in communications rates. For example, the number of requests for telephone service fell from 565,657 in 1978 to 148,726 in 1982, which includes from 98,607 to 54,494 in Prague and from 42,568 to 17,252 in Bratislava. The number of unexecuted requests for transferring telephones fell from 55,096 in 1978 to 41,479 in 1982, for Prague from 18,739 to 9,343, while for Bratislava it rose from 4,968 to 6,172.

The rate changes also caused an increase in telephone removals: in the last 3 years a total of 100,849 phones were disconnected, or 49.19 percent of the number installed. It required great effort on the part of telecommunications workers to offset this decrease by installing a greater number of telephones and to meet planned objectives in the development of telephony even under these more difficult conditions. The efforts expended were reflected in the greater number of telephones installed: in the last 3 years a total of 205,020 telephones were installed.

There has been a gradual reduction in the number of telephone disconnections: in 1980, 58.51 percent of telephones were disconnected, in 1981, 45.71 percent and in 1982, 41.03 percent of the total number installed.

In the course of the Fifth and Sixth 5-Year Plans there was a moderate expansion in the numerical status of specialized technical employees in telecommunications and radio communications: the number of employees in telecommunications in 1970 (19,623) was increased to 22,920 in 1980 and in radio communications from 2,054 to 2,757.

In comparing labor productivity (from service fees), the results per employee for 1980 in telecommunications are explicit for telecommunications and radio

communications: total for the department, Kcs 117,239; telecommunications, Kcs 349,040; radio communications, Kcs 253,899.

One of the basic tasks in implementing the conclusions of the 16th CPCZ Congress for the Seventh 5-Year Plan is also to achieve the goals of the Ministry of Communications and the objectives of the party's economic policies as contained in "Main Directions of Economic and Social Development of the CSSR for 1981-1985." These documents emphasize, among other tasks, that achieving the objectives of the Seventh 5-Year Plan calls for setting a consistent course toward the growth of efficiency and quality in all work by means of greater effectiveness of production facilities on the basis of rapid and maximum application of the results of research and development and a decisive change in the use of capital assets.

This also fully applies to the Ministry of Communications, to every directorate for communications and all communications organizations, and therefore behooves us at all levels to deal with specific situations and make better use of the capital assets built up and look for ways to make systematic and efficient use of existing unused resources.

Planned investment capital also must be concentrated on specific objectives and purposefully utilized, chiefly for the elimination of imbalances, thereby creating in this way, too, the conditions for more rapid and effective satisfaction of the people's requirements for communications services.

8491

CSO: 5500/3009

TELECOMMUNICATIONS INVESTMENTS IN 1983-1985 PUBLISHED

Prague TELKOMUNIKACE in Slovak No 10, 1983 p 146

[Article by Eng Michal Ondrejka, first deputy minister of communications, CSSR: "Capital Investment 1983-1985"]

[Text] The 16th CPCZ Congress laid a great task upon the Ministry of Communications--to improve further and expand services to the population and socialist organizations.

The plan approved for the Seventh 5-Year Plan limits the extent of capital investment by the Ministry of Communications. Basic factors characterizing capital investment in the Ministry of Communications for the Seventh 5-Year Plan may therefore be designated as:

- limiting the extent of investing as compared with the preceding 5-year plan,
- changing the structure of the overall volume of work and deliveries in favor of projects with RN [budget costs] up to Kcs 2 million and SZNR [machinery and equipment not included in budget costs] which make up almost 78 percent of the total volume for 1983-1985.

This means that, contrary to the original course of development in communications, in the Seventh 5-Year Plan the number of construction project starts is limited and most attention is given to completing those projects under way and remodeling and expanding equipment in communications installations already in operation. Therefore, it was essential even while preparing the detailed breakdown of directives for 1983 and specifications of the plan for 1984-1985 to see that resources expended were concentrated on highly efficient and most important projects which provide for essential renewal and development in the sector of telecommunications, radio communications, in the postal service and in other divisions of communications activity.

Even in spite of difficult conditions and the limited extent of building starts it will be possible to render operational by the end of the Seventh 5-Year Plan the following in the telecommunications sector:

- five automated tandem central telephone offices, as follows: in 1983 one central office, in 1984 four central offices; it is also planned to expand three tandem central offices during this period;

--five automated junction circuits, of which two UTO [telephone junction circuit] in 1983, one UTO in 1984 and two UTO in 1985.

The communications plan calls for the following increases during the 1983-1985 period:

--a total of 235,000 telephone stations, of which 114,000 are main telephone stations, including 100,000 residential telephones.

Thus, during the entire Seventh 5-Year Plan the number of telephones will increase by 9.27 percent, to 3,525,000 stations (main telephone stations by 8.61 percent to 1,829,000; residential telephones by 10.81 percent to 1,271,000).

In the radio communications sector a radio transmitter was put into operation in 1983 in Rimavska Sobota and by the end of the 5-year plan three more transmitters for TV Program 2 will be put into operation.

In the area of the postal service and PNS [Postal Newspaper Subscription Service] transportation collection centers with mechanized processing of letter mail will be put into operation, specifically, one transportation center in 1983 and three transportation collection centers in 1985. In 1984 two transportation collection centers with mechanized processing of packages will be put into operation. Also in 1984-1985 the stock of postal railroad cars will be renovated.

For construction starts with RN over Kcs 2 million, we are taking measures to begin construction of important communications projects even in this 5-year plan in spite of the restrictions: a postal transport building in Prague-Malesice, renovation of antenna masts of certain radio and television transmitters and, at the end of the Seventh 5-Year Plan, preparatory groundwork will begin for a new Prague television transmitter which is located in the Petrin observation tower and is to provide quality cover for the burgeoning population centers of the capital city Prague, and which will also permit further future development in accordance with the plans of Czechoslovak Television and Czechoslovak Radio. The new Prague TV transmitter should be in operation in the course of the Eighth 5-Year Plan.

In preparing the draft of the executive plan for 1984 and then also for 1985, it is necessary to set up optimal conditions for carrying out the conclusions of the 15th CPCZ Congress regarding "Main Directions of Economic and Social Development of the CSSR for 1981-1985," which calls for uniform and comprehensive fulfillment of the Seventh 5-Year Plan as a top priority assignment.

In recognizing the basic priorities and conceptual aims of the Seventh 5-Year Plan, it is necessary to make use of the favorable results so far in meeting the 5-year plan in order to surpass the goals set for 1984.

In preparing the executive plan for 1984 we proceed from the approved 5-year plan. However, it is also necessary to consider the long-term provisions of public scrutiny of the management of fuels and energy and thereby achieve a lower consumption of basic fuel-energy resources as compared with the provisos of the Seventh 5-Year Plan.

It is necessary to give extra attention to building preparations and ensuring construction by suppliers, reducing unfinished construction in accordance with the goals set for 1984 and effect maximum savings in the whole process of capital construction.

8491

CSO: 5500/3009

BRIEFS

PLANS FOR ANDEAN SATELLITE--In May of next year during the 16th regular session of the board of directors of the Association of Andean State Telecommunications Enterprises (ASETA), an analysis will be made of the feasibility studies for the launching of an Andean telecommunications satellite, according to an announcement in Santa Cruz, Bolivia. After reviewing the earlier study done by ASETA experts, the board, which met in that country, agreed to postpone the Andean satellite decision until May 1984. The Association will also initiate a dialogue with Intelsat to determine whether Andean countries can lease transponders or portions of those repeaters from that international enterprise to begin integrating telecommunications systems as a preliminary step before launching the Andean satellite, Condor. The board of directors, which met in Santa Cruz, also decided to hold the next meeting of the communications ministers of the Andean Pact countries in June 1984, and called a meeting in January 1984 of a technical commission which will prepare the position to be presented jointly by these nations at the World Radiocommunications Administrative Conference for the Planning of Special Services. [Bogota EL ESPECTADOR in Spanish 16 Dec 83 p 20]

CSO: 3500/2028

CONSORTIUM TO STUDY HIGH-TECH TELECOMMUNICATIONS SYSTEM

Hamilton THE ROYAL GAZETTE in English 9 Nov 83 p 1

[Text]

A consortium involving up to 20 different businesses plans to form a company to study the installation of a high-tech telecommunications system in Bermuda.

The company, to be called Infonet Limited, will organise and finance a feasibility study which will probably be carried out by hired consultants.

The move is the latest step forward towards Government's goal of bringing a "broadband" advanced communications network to the Island. And it follows a series of meetings between Industry and Technology Minister the Hon. John Stubbs and representatives of local firms.

Broad agreement on the need for a in depth probe into telecommunications emerged after the Government-organised seminar in September.

The companies agreed to set up a steering committee chaired by lawyer Mr. Frank Mutch which recommended the incorporation of a company.

The committee contacted all businesses which might be interested in the management or use of a high-tech telecommunications system. And it is now anticipated that about 20 will be interested in running Infonet.

The objectives of Infonet will be to study the feasibility of an Island-wide telecommunications network capable of carrying voice, video and data transmissions.

"The company will finance whatever studies are necessary," said Dr. Stubbs. "It is going to cost some money to do this properly. There was recognition of the need to have it done properly.

"And there was, surprisingly but splendidly, a willingness that this study should be funded by the private sector rather than Government. This doesn't preclude continued Government involvement.

"The results of such a study will be much more susceptible to wide acceptance than if Government embarked on it."

It is envisaged that Infonet would manage the telecommunications system if and when it is introduced. "But certainly at the later stage there would be a larger share offering including a public offering," said Dr. Stubbs.

Dr. Stubbs gave a rough guess of \$100,000 for the cost of the investigation which is expected to take several months.

The businesses involved in negotiations for the consortium include Belco, Telco, the three banks, Cable and Wireless and all branches of the media.

A meeting for the subscribers to Infonet is planned for November 21.

CSO: 5500/7510

PARAGUAY

BRIEFS

ABC COLOR LICENSES CANCELED--In a note dated 4 January 1984, the radio communications and frequency administration department of ANTELCO [National Administration for Telecommunications] has conveyed to the newspaper ABC COLOR its decision not to renew the licenses of ABC COLOR radio stations ZPV2402, ZPV2403, ZPV2404, ZPV2405, ZPV2406, and ZPV2407, which were used to establish communication with its mobile units. ANTELCO did not account for the reasons for the measure. [Summary] [Asuncion ABC COLOR in Spanish 7 Jan 84 p 11 PY]

CSO: 5500/2029

COMMUNICATIONS DIRECTORS MEET IN TARTUS

Damascus TISHRIN in Arabic 25 Nov 83 p 3

[Article by Muhammad 'Ali 'Imran: "Participants at Conference for Telecommunications Directors Discuss Means for Operations Development, Organization's Future Plans"]

[Text] The conference for directors of the Central Telecommunications Department and for the chief administrative officers of the governorates was held in Tartus on the 10th and 11th of November 1983 under a slogan of [achieving] ideal operations and developing and expanding communications services. This slogan embodies the principles of the glorious corrective movement.

The conferees discussed Central Department memoranda providing a brief review of the status of operations in these governorates. The memoranda also summarized the achievements of the proposed plan and the difficulties that are facing operations in these governorates. The conferees also discussed memoranda that were submitted by the governorates' chief administrative officers. In addition, they discussed general conditions in the various governorates as well as automatic exchanges in the country. In connection with the conference the editor interviewed the general director of telecommunications and a few conference participants.

Engineer Makram 'Ubayd, director general of the organization said, "The conference is being held in Tartus [as a gesture] of appreciation for the efforts that were made by employees of the Tartus Telephone Department. These employees carried out the projects, operations and the maintenance and rural service [requirements] of the plan in accordance with what available resources would allow."

Engineer 'Ubayd had this to say about the objective and the importance of the conference: "The conference is being held during production month which is observed by the organization in November to commemorate the anniversary of the glorious corrective movement." The conference agenda included the following points:

--A review of what has been implemented so far.

--A future plan of action.

--A study of impediments and how they are to be overcome.

--An exchange among the governorates of opinions, suggestions and successful experiments.

--Continuous interaction [among the conferees] by means of the discussions that took place.

Difficulties Encountered in Operations

Engineer 'Ubayd had this to say about the difficulties that were being encountered in operations. Difficulties interfere with our plans, but we do not stand idly by in front of these difficulties like spectators. Instead, we try to overcome them, particularly those difficulties that have to do with the organization's business measures or with its dealings with public sector companies in the country."

"On the local scene we are facing the difficulty of securing digging permits to execute the networks. We hope that the fact that public sector companies do not adhere to technical conditions--if such non-adherence exists--will not cause authorized officials in the governorates to deal with that matter by banning digging permits. This matter must be dealt with in another way. One of these ways is enforcing adherence to technical conditions and going ahead with operations.

"But on the foreign scene, the fact that credit for some materials is delayed and is not available for others so far has also delayed plans, such as wooden poles and their requirements, manual switchboards, wireless communications equipment for rural areas and cables for the networks."

The general director had this to say about the condition of some automatic exchanges in the governorate of Tartus: "The automatic exchanges that will be introduced into al-Duraykish, al-Mashta and al-Shaykh Badr will service neighboring residential communities. This will be similar to the linkage that has been executed for residential communities near the exchanges of Safita and Baniyas linking them with the main network."

With regard to implementing the switchboards in these exchanges, construction of the buildings for [these exchanges] has been completed. Equipment installation, however, will be done in the context of implementing the project for 180,000 lines. Final studies for that project are now underway, and the execution period for the project is within 3 years of the date of the work order, which is the date when the line of credit for that project was opened.

5,000 New Automatic Lines for Tartus

Engineer Muhammad Ma'ruf, the director of Tartus [operations] said, "The conference assumes the special importance it has for many reasons. On our part, the conference issued resolutions that pertain to Tartus. Among these resolutions are [the following]:

--Increasing the capacity of automatic switchboards in the governorate to 5,000 lines.

--Undertaking to implement the main cables network and the necessary inspection chambers for the anticipated expansions.

--Designating for the [Telecommunications] Department of the governorate of Tartus the poles it needs in light of what will be obtained.

--Furnishing the department of Tartus with 10 radio devices as soon as they are received.

--Furnishing the department of Tartus with a drill for poles and a vehicle equipped with a crane and a basket as soon as these are received.

--Furnishing the department of Tartus with three wireless collectors as soon as they are provided.

--The department is to appeal to the governor to secure the motorcycles it needs for rural service.

--Designating 25 coin boxes for the governorate of Tartus.

--Having the [Telecommunications] Department of Tartus implement a telephone system for the industrial area in light of anticipated expansions.

--Looking at all the transportation needs of the [Telecommunications] Department of the governorate of Tartus as soon as new vehicles arrive.

Three New Projects in Dayr al-Zawr

Engineer Hamud al-'Ali, director of telecommunications in Dayr al-Zawr said, "These conferences are very important because matters that have to do with operations are discussed at those conferences. The necessary solutions to all problems that have to do with operations are found, and all matters that have to do with the governorates' dealings with each other are settled.

"As far as our department is concerned, we completed the work that had to do with maintenance for air and ground networks and all technical divisions on schedule. The ratio of production and quality was good.

"As far as new projects are concerned, we have three principal projects in the fifth 5-Year Plan and in the project for 180,000 lines. The buildings designated for the three switchboards will be completed before the end of this year. At the present time we are studying the ground networks for the forementioned switchboards.

"As far as projects for rural areas are concerned, we have a shortage in materials, particularly poles. We borrowed 300 poles from the power administration, and work is underway to complete the projects that remain in this year's plan."

Latakia

Mr Amin Shakhis, director of direct dialing in Latakia said, "The importance of the conference is evident in the fact that it is an essential pause that is made occasionally to review and evaluate our work, to determine how much of our plans we've implemented and to find out what the successes and the failures of other

departments have been. The conference also helps us benefit from the experiences of the rest of the governorates.

The Latakia [Telecommunications] Department is one of the leading departments in the area of telephone services. In 3 years the number of telephone subscribers rose from 11,000 to 23,500.

The Number of Automatic Lines in the City of Dar'a Multiplied 12 Times

Mr Muhammad Qasim al-Suwaydan, director of telecommunications in Dar'a said, "Telephone service in our governorate had been neglected in the period that preceded the revolution. After the corrective movement, however, telephone service was developed, and it grew quickly. The corrective movement did give unlimited support to the Telephone Organization. The figures that we will mention indicate the extent of the discrepancy [that existed] and the development that is occurring in the area of telephone service in the city and the village. In 1970 telephone service in the city of Dar'a was provided for 500 automatic lines, but in 1983 there were 6,000 such lines, and they were all used.

"With regard to rural areas, the number of offices, manual exchanges and semi-automatic exchanges amounted to 33. A total of 4,570 lines have been executed in various villages. Of these, 16 offices and exchanges were automatically linked with Dar'a. In addition, some economic establishments that are located outside the city were automatically linked with the system. [These include establishments] such as the canning plant in al-Muzayrib the Tall Shihab Pumping Station, the al-Muzayrib Pumping [Station], a cow farm, the agricultural secondary [school], and a scout camp. There are also 37 control chambers that have been executed in rural areas.

Construction has begun on 11 automatic telephone exchanges in rural areas. These are mentioned in the plan.

About the difficulties that are being encountered in the plan, he said, "Essential primary materials are not available; there is a short supply of trained technical staff. In addition, the underground cables in the city have been damaged as a result of the continuous digging which is carried out by public sector companies to develop and service the city."

Conference Includes Leading Technical Cadres

Finally, we met with Comrade 'Ali Ma'ruf, secretary of the organization's professional team. He said, "The importance of the conference is derived from the fact that it includes all the leading technical cadres in the organization. Professional and technical plans are discussed so that recommendations on important decisions can be made to spare workers from errors."

About the activities of the party's team in the public organization he said, "The party's team is playing an active and a basic role in all the areas of production. It is developing and improving services by working through the production council and the technical committees and by being involved in the activities that are carried out by these committees as well. We also meet with workers and coordinate activities fully with management and with the union committee. This leads

to a productive leadership of professional and political work in the organization. Hence also the effective role of party activity amidst workers is assured.

"Finally, we participated in production work to commemorate the anniversary of the blessed corrective movement, and we convened our conference to demonstrate our sincerity and loyalty to the movement and to the leader of our course, fellow fighter, Hafiz al-Asad."

8592

CSO: 5500/4504

SABC OFFICIAL ON PLANS FOR MANAGING CORPORATION

Johannesburg LEADERSHIP SA in English Vol 2 No 2, 23 Dec 93 pp 50-55

[Riaan Eksteen, South African Broadcasting Corporation director general-designate, interview with Hugh Murray; date, place not given]

[Text] Murray: You have been with the SABC long enough to have decided what the ingredients are for an effective and worthwhile television and broadcasting service. Perhaps you could describe how you see the role of such a service?

Eksteen: I think one can sum it up in one word. That is credibility. If you cannot have a service, be it radio or television, that is credible in an organisational sense or with regard to what it broadcasts, then you are going to run into problems. My background in the diplomatic service made me aware of the need for credibility. But the same applies also to the SABC. Whatever the SABC does, from the Director General and management committee down, has to be done in a totally credible fashion. The people - the viewers and listeners - must get that feeling.

Murray: Doesn't the fact that this is a State-owned operation argue against that very quality of credibility? Doesn't that present you with a disadvantage before you even begin?

Eksteen: I don't think so. The organisation is set up by an Act of Parliament and there is a Minister responsible for the SABC. But that does not mean he has to impinge on the organisation or its activities to a point at which it affects credibility. Every act passed through Parliament must also have credibility. That surely is the name of the game. That is especially so in South Africa where you have a very difficult set of circumstances. The one who carries out the provisions of an act must do so in a credible fashion. And the one

whose life is determined or influenced by an act must also see that everybody handling it does so in a credible fashion.

Murray: Is there not, however, an element of ministerial interference in the SABC, as is often alleged?

Eksteen: I think that allegation is sometimes made very unfairly. The minister and the government for that matter, if they could have their way, would like to have it run their way. At the moment it is definitely not being run their way. You only have to look at the debate in Parliament on the minister's vote some weeks ago in which he voiced criticism of the SABC. I don't think that situation is going to change. Some people look at my assumption of duty here as a move in that very direction - as an extension of government if you like. I intend to rely on only one thing, and that is the Act. The Act that gives me the power as Director General to run an effective organisation. That is what I want to do. I don't want to run it as an instrument of government, I don't want to run it as an opposition instrument. I want to run it as an effective and autonomous organisation that is credible. That will be my goal for the 20-odd years that I have to serve this organisation. I want to stay in this organisation and see to it that the goal I have set for myself is attained.

Murray: So you don't see this appointment as some people have speculated - just another rung of the ladder? You see this as a lifetime career decision for yourself?

Eksteen: Yes, absolutely! I told the Chair-

man of the Board when he appointed me that I am here until I have to retire at 60 – here in the SABC. I am going to stay here whether it is liked or not. There is a vast difference between my appointment as an Ambassador and my appointment as Director General. One was an appointment made solely by the government, solely to go to the United Nations, to go to the outside world and tell them the facts about South Africa and tell them what the government is doing. This appointment by the board of the SABC is nothing like the previous one. The board expects me to do precisely what I said to you earlier – to run an effective organisation that is credible to the majority of people in South Africa. Having said that I know that that is a tall order. But that is what I am looking forward to doing. I know I shan't be able to please everybody. I'm open-minded about that. There is no way in which I can satisfy or please all the members of the government all the time. There is no way in which I can please the opposition all the time. There is no way in which I can please all Whites and Blacks.

Murray: You have taken over at a very interesting time. Some say the government can never again expect to get more than 60% of the Afrikaner vote. So it seems we have a Prime Minister and government appealing to a new constituency including many more English speakers. If there are any political guidelines in this job they must be somewhat confused by new allegiances in the political forum?

Eksteen: Yes, that is so. But I think that the general guidelines that I have set for myself will see me through and I don't expect any contradiction of my goals by any member of the government or by any South African. My aim is first of all to put South Africa first and present over the airways that which is important to South Africa – for South Africa to go ahead politically in whatever way the electorate chooses. At the end of the day we shall have a situation where everybody benefits from that. Now if the government benefits from the facts being presented on television or radio that is one thing. When that happens it does not mean that I am presenting the facts merely to benefit the government.

Murray: You mean that is not propaganda?

Eksteen: It is not propaganda. When the SABC tells viewers in South Africa that

South Africa is threatened by sanctions; that there is a possibility that we are not going to be able to sell our maize to any other country; that people abroad do not want to buy South African exports; that we cannot tour France, and the Tricolors cannot come here to play rugby, then it is not presenting government propaganda. Those are the real facts of life. They affect everybody, whether they support or oppose the government.

Murray: Historically there has been criticism that the SABC has been used by certain people as a medium for quite blatant propaganda. This seems to have eased up a little, since the retirement of Dr Piet Meyer. What is your view on that era?

Eksteen: I do not want to speak about the past because I can only speak as from March 1, when I joined the SABC. I will be able to do so with more authority at the end of the year, when I take over officially. But I do think that the situation right through South Africa has changed a lot, and for the SABC to stagnate would be terribly sad. The SABC must keep pace with change, and that includes professional change. I am not saying that in the past it was not done professionally, but knowing a little bit of the outside world, whatever one tackles in the world today has to be handled professionally otherwise one goes under. Even though the SABC has a monopoly of radio and television in South Africa, it is of prime concern to this organisation to stay professionally on top.

Murray: In the light of these feelings of yours can SA expect more contemporaneous reporting and TV coverage of important world events?

Eksteen: I think so. When important things happen in the world, I think that everybody in South Africa expects the SABC to bring that event to them, on radio and on television. Sometimes we cannot do it on television because of the sheer financial implications, but we will do our level best to keep abreast of all those developments so that we can bring the best to the viewer. I think that the viewer has a right to expect the best and this is the only medium in South Africa that can give it to him. On the other hand we also have to be very conscious of the fact that sometimes it is not possible for us to cover certain events and give viewers some of the productions that they would like to see.

Murray: Are you talking about Equity bans and so on?

Eksteen: Yes. Essentially political problems. We suffer from those as do the viewers. I am not saying that for not having seen all those productions we are poorer, but I am the first one to acknowledge that we are definitely missing something. But I cannot change the preconceived ideas about South Africa that persist. I am not going to fight that because the people concerned will not change their views.

Murray: In some political programmes, objectivity still seems to be a problem.

Eksteen: Certain programmes get certain names . . .

Murray: Certain programmes get certain names and certain interviewers have a reputation for doing interviews on their knees. How does one deal with that kind of problem? It seems there is a real shortage of professionals and top rate interviewers, and generally you seem to have staff problems. Why is that?

Eksteen: Well, I think that you can list a series of reasons for that. Perhaps money is one thing, working hours another. But when you look at the situation as a whole, every South African company, every business, suffers from a lack of certain people, be they professional, skilled or unskilled labour. We all suffer in South Africa. Now the problem with the SABC is that we have high profile people working for us. When one of them resigns there appears to be a great crisis in the SABC because of this high visibility. When something goes wrong with the news - a human error - then 4 or 5 million people in South Africa see it immediately and they think that the SABC is in serious trouble. If that same thing happens in a newspaper people don't even notice it. If people resign from newspapers nothing happens.

Murray: Is there much direct instruction from the government or is the SABC left alone in terms of policy decisions? Does the SABC ever find itself in a position of ethical conflict with the government?

Eksteen: I think that the government leaves us alone to that point where one can present what is important. But if it comes to something that the government feels might be counter-productive to the country and to the people for which the government is responsible, then certainly they have the fullest right to enter into a discussion with the SABC on that matter. It would be on ministerial level with the

board of the SABC not with the Director General. The Director General is not in direct contact with the government. It is through the board because the board is appointed by the government. That is the level of discussion.

Murray: Are those lines of communication strictly observed? If so this could have an affect on certain reservations held about your appointment. There seemed to be a strong feeling that you were the Foreign Minister's right hand man and that this could create a conflict for you.

Eksteen: It does not create any conflict for me or for the government. The last time that I saw or spoke to the Foreign Minister was the day I said goodbye to him on February 28 this year. I have nothing from my side to discuss with him as far as the SABC is concerned, and he has nothing to tell me as to how the SABC should be run. The Minister has the board. He has access to the chairman and the chairman has access to him. They do the co-ordination. They are the link-men. If the chairman and his board think there is something they should tell me or the management committee, well, then, certainly we would listen to them and hear what they have in mind.

Murray: In the case of your appointment the method of communication is vital to your credibility, would you not agree?

Eksteen: I am very conscious of that and I do not want my credibility to be jeopardised. I have a career ahead of me for 20 years. I do not want that to be destroyed. I can see that people think that although I said goodbye to the Minister at the end of February, on the morning of March 1 he was on the telephone telling me: "Listen Eksteen, you have to do this and that". The reality is far from that!

Murray: Would it not be true to say that some fine aggressive interviewers and other TV personalities have had to leave because the climate was hardly conducive to their doing really professional work?

Eksteen: I would be the last to tell any person not to try and be aggressive. Whether we like it or not, we live in a very aggressive world, not only in South Africa but in the world at large. I am not saying that from when you get up in the morning until you go to bed at night you have to be aggressive. If you are conducting an interview you ought to be aggressive. But some

people tend to confuse aggressiveness in that particular situation with being impolite or rude. On many occasions you can get more out of the person who is being interviewed if you are aggressive.

Murray: One of the other things which is a source of constant irritation to viewers is the quality of the news, with Afrikaners conducting English language interviews appallingly, and English speakers doing the same with Afrikaans. We seem to massacre both languages, but because of the apparent preponderance of Afrikaans-speaking journalists on the SABC, the English problem is the more obvious. Does the lack of people to do that work properly indicate a preference on the part of news gathering elements in the SABC for giving Afrikaans journalists all the work, or is it another example of English apathy towards public service-oriented jobs?

Eksteen: I think it is a little bit of both. We are certainly not perfect in that respect. There is room for much improvement, and I know that it can be very irritating, both on television and also on radio. A person you expect to be a professional, and who is being paid for doing a job, must be able to present his case properly. Ideally, in this country, he should be able to present bilingually. I am an Afrikaans-speaking person, with Afrikaans as my mother tongue. I think that every South African should get himself to that point where he is fluent and can conduct his line of business in both languages.

Murray: But television is such an exacting medium. It requires absolute precision of language, not simply fluency.

Eksteen: I quite agree with you there, and I think there is a movement underway in the SABC to look at that particular problem in great depth. Certainly we shall do our best to improve as much as possible. No-one wants his language to be mutilated. No, I think we are very conscious of that.

Murray: On a more practical level, has any progress been made on matters like TV4 - full commercial TV and so on? Are there any further developments in that area or are we still committed to the status quo for the foreseeable future?

Eksteen: Well I think that before going into that we should also bear in mind what I said about the lack of staff, the lack of funds and all those factors we have had to

take into account too. We have difficulty in maintaining three channels at the moment.

Those three channels make very heavy demands on the resources of the SABC. But having said that I am not saying that these possibilities are excluded and that we shan't move in that direction. Certainly, we would like to consider presenting something more to the viewer. Something that the viewer would be interested in apart from the general things that they see now. But one thing that I don't think is going to be feasible is to have split channels - one for Afrikaans and one for English. I think we have grown out of that phase of our history.

Murray: But that was the original concept was it not?

Eksteen: You know, it has worked well to have a mixture. It is very, very important for one language group getting to know something about the other. And the same applies not only to Afrikaans and English speaking South Africans with regard to TV 1 but it also applies to TV 2 and TV 3. Black audiences certainly watch TV 1. The converse is also true.

Murray: You have been travelling. Have any new developments of interest resulted from your travels?

Eksteen: Well, it was the first time I had been to the Far East so it was an education for me to watch their television and to see how they work behind the scenes. When we were in Japan we had long discussions with one of the commercial television stations there and were most forcibly given proof of how cut-throat commercial television is. Every morning at 8.30 or 9.00 they have the ratings available in print of all the television programmes of the previous evening. You really have to be on your toes to survive there! That is not a bad thing but it creates a lot of problems. What really struck us, however, was how effectively they are using computers, compared with ourselves. It is just incredible. But they have the technology. They have grown up with the technology. The television stations were already established when their computers came onto the markets so the computers grew into the television station and the television service. Here the reverse is true in that television in South Africa grew into computers and we have not yet succeeded in getting anywhere near the Japanese standards.


Murray: Will the SABC ever really be self-supporting or will the taxpayer always have to carry this huge load? Is there no prospect of fully commercial, profitable TV?

Eksteen: I don't think so. Having spent some time in the United States and having lived with commercial television, I think that commercial television is really a big pain, not only for the viewer, but also a big headache for those people running the commercial stations. As I said earlier, it is a very cut-throat business and I don't know whether that is a good thing in the long run.

Murray: The SABC is a monopoly, yet it has to satisfy the needs of the biggest market in the country. It should be sensitive to that market in the sense that it cannot afford to be overpowering. Are you sensitive to markets?

Eksteen: Well, certainly one has to have market surveys and one cannot turn a blind eye to markets. No-one wants to be overpowering, least of all the SABC.

Murray: Is there anything in terms of policy, in terms of style that you are going to bring to the SABC that it hasn't had before?

Eksteen: Well, I think that the one thing that I have learnt so far in the job that I had is that one has to take responsibility. Everyone in the SABC must have responsibility and be prepared to carry a fair share of it. Sometimes we have to take responsibilities that are out of proportion to our positions. We all have to take more and more responsibility, stand up for our beliefs, move ahead and break new ground where and when necessary. This is imperative. Once that is realised and done all of us at the SABC should contribute towards ensuring an effective and efficient organisation. 

BOP-TV SPILLAGE INTO WHITE SUBURBS CAUSES DISPUTE

SABC Warning

Johannesburg RAND DAILY MAIL in English 30 Dec 83 p 3

[Article by J Manuel Correia]

[Text]

THE SABC last night issued a thinly-veiled warning that it is prepared to clamp down on Bop-TV spillover into white suburbs.

The warning came in a surprise statement on the 8pm news cast on TV1.

The SABC warned people to "be cautious before investing in receiving systems in an attempt to tune into BOP-TV as reception in spillover areas is purely incidental and its continuation cannot be taken for granted now or at any time in the future".

Observers believe the statement came from the highest echelons of the corporation and that two factors prompted the sabre-rattling exercise.

- Adverse political statements by banned persons and others might be broadcast from Bophuthatswana, and

- The spillover area is far greater than originally expected.

Adverse political material would clearly be unacceptable to Pretoria but observers are puzzled because if such statements are indeed made they will still be seen by blacks in the target areas.

Secondly the top programming announced by Bop-TV and the wide spillover area could drain a high number of black and white viewers from the SABC's services, resulting in a loss of advertising income and viewership.

Observers have previously noted that if the Government or the SABC are seen to muzzle Bop-TV this will create a dilemma for Pretoria, leaving it open to the accusation that Bophuthatswana's independence is a sham.

Most of the East Rand will lose out on Bop-TV, but the majority of Johannesburg has gained a new TV station.

It must be emphasised that reception cannot be uniformly guaranteed as it might be received in one house in a street and not others.

Signal frequency in Johannesburg is Channel 37.

Aerials for Bop-TV were especially designed by the Johannesburg firm of Aerial King Sales and it must be noted that in most cases viewers will require the company's UHF aerial, plus high gain amplifier and power supply, co-axial cable and a combiner to combine with your present VHF aerial.

These aerials come in kit form and retail at between R130 and R149.50.

Set-top aerials for reception in strong signal areas like the black townships retail at under R30.

Experts recommend that viewers try horizontal and vertical positions on their aerials for the best picture.

For names of dealers and installation experts viewers are asked to contact Johannesburg 337 9130.

In Johannesburg and surrounding areas, the following

suburbs are receiving the Bop-TV signal:

● **WEST:** Briton, Coronationville, Newclare, Beaumont, Muretha, Westdene, Triam, Newlands, Morningside, Denham, the higher parts of Normcliff, Florida, Fairde Hills, Florida Park, Discovery, Rosewood, Haddon, Devonhurst, Windward, Whetstone, Kagiso and Rustenburg.

● **NORTH:** Auckland Park, Westdene, Colmarville, Bayside, Linden and Under Extension, Victory Park, Greenacre, Parktown North, Parkhurst, Cresta, Windsor, Randburg, Rosemead, Midrand, Ferndale, Rembrandt, Ridge, Sandown, Bergview, Craighall Park, Kensington 8, Brimley, Oshana, Douglass, Luma Park, Sandhurst, Galt, Manor, Parkmore, Hyde Park, Durwood, Rosebank, Parkwood, Sandhurst, Forest Town, Edenburg, Houghton, Marissa, Marissa North, Bodiva, Ross, Athol, Sandown, Sandown, Morningside.

Reyn, Woodwood, Brenna, Kew and parts of Alexandra, Camdeboo, Rosewood, Orchard, Highlands North, Roseville, Glenhaze, Lyndhurst, Sandringham, Edenburg, Orange Grove, Fairmount, the top parts of Mountain View, Cynodine and Lindeberg.

● **EAST:** Broomfield, Hillside and Bona Vista, Highlands, the higher parts of Observatory, the higher parts of Bellevue, Sandown, parts of Edenburg and Bedfordview but not the East Rand townships.

● **SOUTH:** Maitland West, Maitland Park, Fordsburg, Vredeburg, Selby, Riverside, Glenhaze, Bona Vista, La Rochelle, Regent Park, Rosemead, Turfloop, Kew, Kew North, Rosebank.

Southside, Crown Gardens, Ridgebury, Glenhaze, Oshana, Lyndhurst Park, Forest Hill, Bona Vista, Rosemead and not included in Windward Hill, Windsor, Midrand, Camdeboo and Lorraine.

'Catch-22' Situation

Johannesburg RAND DAILY MAIL in English 31 Dec 83 p 2

[Article by J Manuel Correia]

[Text]

THIS week's thinly-veiled threat by SABC-TV to clamp down on Bop-TV's signal spillage into white areas is being seen by observers as a giant mistake and one which has landed the corporation in a Catch-22 situation.

It also appears to signal a most inauspicious start to the career of the SABC's new director-general, Mr J A Eksteen, who officially assumes office on January 1.

Although observers are certain the statement came from the highest echelons of the SABC, they do not believe Mr Steve de Villiers, the retiring director-general, was involved in it.

On Thursday night, in its main newscast, the SABC warned people "to be cautious before investing in receiving systems in an attempt to tune into Bop-TV as reception in spillover areas is purely incidental and its continuation cannot be taken for granted now or at any time in the future."

No further comment on the statement was forthcoming from the SABC yesterday. Neither was there any reaction from Bop-TV.

It is believed the Auckland Park sabre-rattling came about because the SABC is in a funk over the wide spillage area — much wider than ori-

ginally expected.

It could lose thousands of black and white and black viewers, resulting in a loss of advertising income.

Technically the SABC has the capacity to weaken the signal, but if it does so it will certainly land itself in hot water.

Should the signal be further weakened to mop up spillage, the possibility cannot be excluded that Bop-TV may act against the SABC for breach of contract.

Politics may also have played a part in the statement because Bophuthatswana's Cabinet Minister responsible for radio and TV, Mr Amos Kgomo, said in Mmabatho this week: "If there is a news story and we can get to the people — say Mrs Winnie Mandela — then we will, if the story is valid."

This has obviously been interpreted as meaning that Bop-TV might be prepared to quote banned persons and certain organisations.

If so, it has been totally misread. It is believed that the Minister meant that in the case of valid news stories about certain matters the station would report on them even if SABC-TV did not, without contravening the law.

Bophuthatswana officials have certainly not categorically said they intend broadcasting material prejudicial to the security interests of South Africa. They can't anyway, in terms of the agreements signed between the two countries.

What is puzzling observers is the fact that even in the event of a contentious political statement being broadcast, it would still be seen and heard by blacks in the target areas. Cutting down on the white spillage, therefore, makes little sense, if any.

So clearly the main reason appears to be that the SABC is really frightened at viewers in white areas being wooed away from its service, without apparently realising that the spillage signal cannot be guaranteed anyway.

If the corporation carries out its threat, public backlash in the areas involved is likely to be considerable.

The SABC also risks alienating commercial interests that wield considerable clout.

Politically the picture is even more horrifying. If the SABC and Pretoria are seen to muzzle the fledgling service in any way they will lay themselves wide open to the accusation that Bophuthatswana's independence is a sham.

BRIEFS

BELTEL'S COMPUTERS--BELTEL comes of age next month with the choice of main computers to run the Post Office's electronic public information system. Mr Fanie Viljoen, leader of the project to make a vast range of data available through ordinary television screens, says there are seven proposals to be considered by the State Tender Board on January 6. After nearly three years of controlled testing Beltel--equivalent of Videotext overseas--is almost ready to go public to give SA an instant mass information service. Facilities should eventually range from buying cinema, airline and rail tickets from the comfort of an armchair to checking stock exchange prices around the world or having virtual instant access to scientific or technical data published and stored overseas. The pilot Beltel system has been running on a PDP 11/70 and now has about 700 users. Most are information suppliers, rather than customers, who are expected to use the system much more once full-scale operation is achieved. For Beltel to be a success much cheaper customer terminals will have to be widely available. A full editing terminal, mainly used by commerce, costs about R4 000 but there are simpler and less expensive units for domestic customers. [Gail Purvis and Berenice Margolis] [Excerpts] [Johannesburg RAND DAILY MAIL BUSINESS DAY in English 23 Dec 83 p 3]

CSO: 5500/37

JAPANESE FIRM TO BE CONSULTANT IN MICROWAVE LINK INSTALLATION

Lusaka DAILY MAIL in English 29 Dec 83 p 1

[Text] Posts and Telecommunication Corporation (PTC), yesterday signed a K1.9 million agreement with a Japanese firm as consultancy fee for the installation of microwave link in Northern, Eastern and Luapula Provinces.

The agreement was signed with Nippon Telephone International Consultancy Company at the PTC headquarters in Ndola. The Japanese firm was represented by Assistant General Manager, International Operations, Mr Kenichi Hatano.

Speaking at the signing ceremony, PTC director-general Mr Phillemon Ngoma explained that the consultancy fee, which amounts to K1,911,459, has been made available through a loan given to the Zambian Government by the Overseas Economic Cooperation Fund (OECF).

Mr Ngoma said the agreement involved installation and commissioning of the Kasama-Mansa microwave link and also provision of rural radio, television and telephone system in Northern, Eastern and Luapula Provinces.

The PTC chief said the project had been delayed for one year because funds were not released due to certain procedural considerations.

He thanked OECF for providing funds and pledged that PTC would do everything possible to speed up completion of the project so that people in these areas could also enjoy radio, telephone and television facilities.

One of the conditions of the loan agreement was that the contract must go to one of the Japanese firms and once the tender has been awarded actual work will begin on the project, Mr Ngoma explained.

Mr Ngoma said Nippon Telephone International Consultancy Company's major task was to ensure that the equipment supplied by the contracting company was in good condition.

He added that during the first phase the company will be involved in engineering design, services, preliminary studies, field survey, preparation of tender documents and training of PTC staff.

In the second phase the firm will be involved in evaluation of the contract, preparation of tender replies and will help in contract negotiations.

PRAGUE RADIO, TV ORGANIZATION TO EXPAND SATELLITE LINKS

Moscow PRAVDA in Russian 31 Oct 83 p 4

[Article by L. Chausov, Prague: "Satellite Frequency Bands: A Report on International Collaboration in Space"]

[Excerpts] A tower capped by dish antennas rises above the roof of a building belonging to the Ministry of Communications of the Czechoslovak Socialist Republic in the capital district Prague-6. A new building with an original architectural design is located alongside this building (the location is by no means accidental). The four nickel-plated letters on the pediment of this building read: OIRT [Organisation Internationale de Radiodiffusion et Television]. These letters are an acronym representing the abbreviated name of the International Radio and Television Broadcasting Organization based in the capital of Czechoslovakia.

It is precisely here where ground, space and other communication channels of various countries designed for transmission of radio and television signals to space interweave in an invisible tight knot. To use a figure of speech, OIRT is a harbor in which ships laden with news are docked waiting to be handled, loaded and unloaded, from which they continue their voyage to other parts of the world. Huge volumes of audiovisual information are transmitted and many signals are relayed via Prague. The main "Intervideniye" [television and radio program broadcasting and technical center] coordination centers are located here. Television programs are relayed from this center via satellite to other countries with the aid of the "Intersputnik" [Interstate satellite] relay system.

What is OIRT? Briefly it is a voluntary noncommercial international association of television and broadcasting organizations founded to facilitate the exchange of television and radio programs and equipment innovations in an endless pursuit of perfect means of mass communication.

"Our activities," states general secretary of OIRT, Milena Balashov, "are guided by principles of international collaboration established by the UN Charter and by the statutes of the Helsinki accords. Our organization helps radio and television employees in socialist and other countries to acquire useful experience from each other and apply it creatively. In the final analysis it enhances the dissemination of true information and familiarizes people with the achievements of art and culture and promotes contacts among nations."

The "Intervideniye" system established in 1960 as part of OIRT implements a broad exchange of television programs among member countries. As noted at a meeting of OIRT management organizations which took place in Bucharest last spring, the volume during the last year alone was about 3200 telecasts.

To find out how such an exchange is implemented in practice, we will meet specialists dealing with technical communications problems.

The frames on the screen of the color monitor in the office of the technical director of OIRT, A.A. Kashel', change automatically after an ultrasonic impulse is beamed to the television receiver. The channel selector is located in a flat box which can fit in the palm of a hand and is used for a fast check of picture quality in all television broadcast bands. The control rooms of the Prague Technical Center can be viewed from here by simply pressing a button. I tried it out myself.

"I invite you to accompany me to the place from which telecasts are relayed via satellites in space," said Anatoliy Arkhipovich. "You know the old saying, a picture is worth a thousand words."

Josef Weiser, a Czechoslovak engineer, met us at the entrance to the "Intervideniye" coordination center building. He was in charge of a group of specialists on duty, working calmly and efficiently as a team in the control rooms behind dispatcher desks in glass-paneled operator cubicles. From here staff communicate with colleagues abroad over special communication channels including direct communication via satellite and agree on the transmission time for topics of current interest. One staff member is adjusting the reception picture contrast of a news videocast; other staff members are checking the quality of the associated audio signals.

"The use of satellite communications to meet the needs of 'Intervideniye' operating under the auspices of OIRT enables us to solve many problems," notes J. Weiser. "The advantages of a 'space cable' over which news is relayed directly on a daily basis between television studios of socialist countries are indisputable. In the first place, events are explained and interpreted more rapidly. Information is relayed at a faster rate. From a technical standpoint the quality of the relayed material has also been improved. In addition, the procedure for ordering desired subject matter has been simplified, and the number of intervals in which communication is taking place in a particular time period has been increased. The necessary discipline can also be maintained more easily when communications are established in this manner. In short, the use of satellite frequency bands by the Soviet communication satellite system fosters, as we say, discipline in space."

A.A. Kashel' talked in turn about the invaluable assistance given to the International Radio and Television Broadcasting Organization by its host country. He had many words of praise for his colleagues in Czechoslovak Television and Radio and in the Ministry of Communications of the Czechoslovak Socialist Republic. The latter is doing everything necessary to ensure

reliable operation of equipment in the center and is constantly modernizing the equipment. The value of this collaboration cannot be overestimated, since no major radio and television network can operate nowadays without sophisticated technology, not to mention the widely ramified mass communication network used by OIRT.

The field of electronics is a good example. We halted for a minute and observed the computer. The electronic computer compared expenditures incurred using transmission lines on the ground taking into account their length with those incurred using orbital communications channels of "Intersputnik" and then selected the lowest cost alternative.

The sophisticated equipment with which the control rooms and studios in the center are filled to capacity will be utilized to make the work of the International Radio and Television Broadcasting Organization even more efficient. The organization is confidently embarking on telecast relays via satellite over assigned frequency bands and greater achievements in mutual collaboration.

In fact, at the present time more than half of all international television program exchanges realized in the OIRT network are relayed via the "Intersputnik" system. This fact was noted at the twelfth session of the "Intersputnik" council which took place recently in Tashkent. New radio and television stations linked by satellite scheduled to be built in the next few years in South Yemen, Syria, Kampuchea, Nicaragua, and in other countries were also mentioned at that meeting.

12583

CSO: 5500/1005

BRIEFS

SWEDISH, FRENCH TELE-X CONTRACT--On 22 December, in Paris, Messrs Frederik Engstrom, general manager of Swedish Space Corporation, and Charles Bigot, general manager of Arianespace, signed a contract worth 385 million francs for the launching of the Swedish satellite Tele-X by an Ariane launcher in 1986, it was announced in a press release from Arianespace, the company in charge of the European rocket marketing. The Tele-X satellite is a joint Finnish, Norwegian and Swedish project for direct television, data and video transmission. The company's total backlog of orders exceeds 6 billion French francs and, according to the communique, represents the launching of 26 satellites after the next 2 launchings in the promotional series, to be supervised by the European Space Agency. Over 40 percent of the orders represent exports outside Europe. With this new order, the production of Ariane is ensured until flight 27 (early in 1987), the press release also stated. [Text.] [Paris AFP SCIENCES in French 22 Dec 83 p 17] 9294

LIECHTENSTEIN SIGNS EUTELSAT AGREEMENT--On 15 December, Liechtenstein became the 22nd country to join the final EUTELSAT [European Telecommunications Satellite] organization. At the Ministry of Foreign Relations in Paris (the EUTELSAT agreements are kept in France), Count Ledebur-Wicheln, Liechtenstein embassy counsellor, signed the convention creating the organization and the operating agreement concerning the use of the satellite system. Austria, the FRG, Belgium, Cyprus, Denmark, Spain, Finland, France, Ireland, Italy, Luxembourg, Monaco, Norway, the Netherlands, Portugal, the United Kingdom, San Marino, the Holy See, Sweden, Switzerland and Turkey have already signed the final EUTELSAT agreements. [Text.] [Paris AFP SCIENCES in French 22 Dec 83 p 17] 9294

BRITISH-BELGIAN UNDERWATER CABLE--The first optical-fiber underwater cable in the world will be laid between Belgium and Great-Britain. The 122-km long cable was just ordered from the British company Standard Telephones and Cable by a consortium consisting of British Telecom for Great-Britain, the Deutsche Bundespost [Federal German Post Office] for the FRG, the RTT [Radio, Telegraph and Telephone Administration] for Belgium, and the PTT [Post, Telegraph and Telecommunications Administration] for the Netherlands. According to British Telecom, the order amounts to 7.25 million pounds (about 10.5 million dollars). The cable will have a simultaneous transmission capacity of close to 12,000 calls, and will connect Broadstairs (between Dover and Margate) to Ostend. This will be the fifth telecommunication cable between Great-Britain and Belgium. It will be laid in the spring of 1985 by the British cable-ship "Alert" which will also bury it in a trench so it will not be damaged by ships, and especially by the trawls of

fishing boats. The inauguration is scheduled for late in 1985. According to British Telecom, the cable will be used not only for telephone calls between Great-Britain and the continent, but also for data links and other communications. [Text] [Paris AFP SCIENCES in French 22 Dec 83 p 33] 9294

FRG OPTION FOR TELECOM 1--On 7 December in Paris, Thomson-CSF announced that three French companies, Thomson-CSF Communications, CIT-Alcatel and SAT [Telecommunications Company] had just obtained a contract for the sale of approximately 45 million francs' (5.42 million dollars) worth of equipment to the Federal German Post Office, to enable the FRG to access the network of the future French satellite Telecom 1. According to the French company, which is the prime contractor in the French consortium, this sale shows the FRG's interest in the communication system that will be implemented when the Telecom 1 satellite is launched by the Ariane rocket in May-June 1984. Telecom 1 will cover France, the FRG and southern Great-Britain. The Federal German Post Office will thus experiment and test the data, voice and image transmission services offered by the Telecom 1 interenterprise network, Thomson-CSF added. Following the example of the British Post Office, which has already acquired a similar receiving system, Dornier System, acting on behalf of the Federal German Post Office, will receive, starting in the second half of 1984, seven AMRT-25-Mbit terminals, seven systems of connection to the terrestrial network, one data-processing center and subscriber-connection equipment, Thomson-CSF indicated. Over 100 similar transmission stations have already been ordered by the French Post, Telecommunications and Television Administration. [Text] [Paris AFP SCIENCES in French 8 Dec 83 pp 36-37] 9294

CSO: 5500/2574

BUNDESPOST PLANS INTEGRATED SERVICES DIGITAL NETWORK

Frankfurt/Main FRANKFURTER ZEITUNG/BLICK DURCH DIE WIRTSCHAFT in German
25 Nov 83 p4

[Article by Daniel Winter]

[Text] In the broad area of communication by a central exchange, everyone can exchange information with everyone else. Telephoning, telecopying, telex, and teletex, display-screen text, data communication (and later also video phoning, rapid facsimile, video conferences, fast data transmission) all belong to this field. Digitalization of this field is now impending in the Federal Republic. Integration of all networks and services into a digital universal communication network ISDN (Integrated Services Digital Network) is being implemented step by step. Even for technical experts, the complex "communication by central exchange" in all three areas--network, exchange, terminals--and their linkages with one another is not easy to survey.

Digitalization entails advantages. With the introduction of digital technology, the entire communication network becomes more economical. Disturbances, for example so-called noise, crosstalk, and distortion in telephoning, have no effect on digital transmission. Furthermore, the flexibility of the network with respect to new digital telecommunication services is to be emphasized, as well as the possibility of integrating speech-, text-, data-, picture-, and future broadband services. Another advantage is the uniform technology in the entire telecommunications network and thus better standardization and efficiency possibilities. New transmission media, for example light-wave guides open up new perspectives. In comparison to conventional technology, investment savings are to be expected with the digital technology.

Recommendations for More New Services

The future digital universal communication network ISDN, which is supposed to make possible "mixed operation" of several communication services, is currently being standardized by various study teams of the CCITT. By the end of 1984, the following topics will be treated: message transmission, the interaction of teletex, and in particular display-screen text, with other services, and telewriting (remote drawing). The Study Team 1 is

working out recommendations for more new services. Standards for appropriate terminals are being worked out by Study Team 8. Only after 1984, will services be discussed for broadband communication (movie picture transmission, fast facsimile, combined transmission of text and facsimile information, video conferences, fast data transmission).

A survey of existing networks and of the planned development line of central-exchange networks: At this time an analogue telephone network, a digital telex network, and a digital line-transmission network (Datex-L) and a digital packet-transmission network (Datex-P) cover the area of the Federal Republic. Furthermore, an analogue and a digital network are offered for direct data connections (direct dialing).

In the analogue telephone network, the following services are currently being performed: telephoning (up to 40 characters per second), long-distance copying according to CCITT Groups 2 and 3 (up to 1200 bits per second), video text (up to 4800 bits per second), and data transmission (up to 4800 bits per second). In the digital telex network, the following services are possible: telex and data transmission up to 50 bits per second. The digital Datex-L network offers the service teletex as well as data transport services for transmissions up to 9600 bits per second. In the digital Datex-P network, data can be transmitted with up to 48,000 bits per second. The digital direct-dialing network is also suitable for the same bit rate. The Datex-P network is furthermore used for the computer linkage between video text centrals.

The communication requirement, especially on the part of large users from business and management, requires that the telecommunication services that presently are still separated should in the future be subsumed in a uniform wide-area communication network, which means that speech, text, data, and picture transmission or mixed forms of these communication modes will become possible simultaneously. This digital communication network must be built anew and will be the ISDN. With a useful bit rate of 144 K bits per second, as a direct connection systems without intermediate generators, a digital base connection with a channel structure of B+B+D on a double copper strand will be implemented. The base channels B will each have a bit rate of 64 K bits per second, and the D channel will have a rate of 16 K bits per second.

The digitalized telephone network will be the basis for the future service integration. This is a network based on the 64 K bit per second voice channel. The connections in the ISDN run from subscriber to subscriber and are digital all the way. The main connection for a subscriber provides, for each of the two directions, 264 K bit per second channels and 160 K bit per second signaling channel. The 264 K bit per second channels can be set up to various subscribers. Each subscriber receives only one call number, independent of the number and type of speech, text, data, and picture communication services which he requires. The ISDN therefore has characteristics such that multi-functional terminals can handle communication between speech, text, data, and pictures.

In the first phase of constructing the ISDN, only a thin network will be implemented. This will be superposed on the current analogue network and will work in parallel thereto. A comprehensive ISDN can be expected only during the nineties. The Bundespost intends, beginning in 1984, to implement model tests with a limited number of subscribers. The intention is to sensitize users of integrated communication forms to the future application possibilities. To try out the digital connections, but not yet on an ISDN basis, the Bundespost will make available a 64 K bit per second model network based technologically on the Datex-L network. In contrast to the ISDN standard bandwidth of 144 K bits per second, only a 64 K bit per second useful channel and a 2.4 K bit per second signaling channel will be offered for the model network.

In the form provided by the Bundespost, the ISDN can include only narrow-band services (telephone, telex, teletex, telefax, picture text, data transmission up to 64 K bits per second), since now it uses the already laid copper cables (more than 40 percent of all investments for communications technology resides in the existing copper cable network). For broadband services, with their higher information throughput (rapid facsimile, video phone, video conference, fast data transmission, fast remote printing, computer dialogue at high speeds), copper cables are not suitable for physical reasons.

By introducing the ISDN, the Bundespost will secure the further processing of analogue telephone extension-station systems in the future ISDN; this is also true for presently available analogue telephone terminals, for telefax and teletext devices, which will also be connectable to future ISDN-capable extension-station systems through so-called terminal adapters. It will also be possible to perform display-screen text services through terminal adapters in the later ISDN. But as soon as the ISDN is introduced, more powerful ISDN variants of display screen text, teletex, and telefax will be developed. The international framework conditions required for this must still be specified.

IBFN at the Center Point of Future Considerations

At this time, the collection of remote copying and teletex into one new service, namely textfax, is being discussed. Data transmission can take place in the ISDN with 64 K bits per second. The modems that are required with current terminals in the analogue network will be obviated in the digital network. If higher transmission rates than 64 K bits per second are required internally-- the broadband network IBFN will make this possible only in the nineties-- local network systems provide a way out.

All endeavors finally flow into the wide-area service-integrating broadband telecommunications network IBFN based on glass fibers. This network stands at the center point of future considerations. It will combine all narrow-band and broadband services, both the central-exchange forms of service (telephone, telefax, teletex, video text) as well as distributed forms of services (video, broadcasting, videl text). Digital glass fiber

and satellite transmission paths as well as broadband digital coupling fields as juncture nodes are the modules of this network.

The Bundespost is currently operating several glass fiber lines with a transmission rate of 34 megabits per second in full effective operation. Furthermore, since the beginning of 1983, the first glass fiber project with a bit rate of 140 megabits per second has been finished in Berlin for research purposes. Between 1985 and 1995, the Bundespost wants to lay 100,000 kilometers fiber annually in the telecommunications network. The most expensive cable investments arise in the area of local networks.

Digitalization of Central-Exchange Technology

Using high-grade gradient fibers, various laboratories have, for example, carried several thousand telephone conversations or several television programs over distances from 50 to 100 kilometers without intermediate amplification (Bigfon-standard provides five broadband and six narrow-band channels, gradient fibers with 0.1 millimeter diameter, intermediate amplifier spacing 15 to 20 kilometers). Bigfon uses broadband glass fibers only as a reference point. This broadband character can be raised to several multiples by means of another technology, namely the light-carrier frequency technology based on monomode fibers. The IBFN, based on this technology, will surely become the communication network at the beginning of the next millennium.

Public central-exchange transmission equipment makes up about 30 percent of the total value of current telecommunication equipment in the Federal Republic. When a transition is made to digital technology, this equipment will have to be replaced. To be able to use fully the advantages of digital communications technology, the central-exchange transmission systems must be designed digitally all the way through and must have uniform performance characteristics. Digitalization of the central-exchange transmission technology leads to a uniform useful signal form for central-exchange and transmission processes and thus to a noticeable simplification of the transportation problem in comparison to the analogue technology.

Digital central-exchange technology will be used by the German Bundespost from 1984 on in its telecommunication centrals for telephone communication. The secretary of the Bundespost recently rendered a decision in favor of two mutually competing digital central-exchange systems. He is letting contracts for the delivery of the first digital series central-exchanges in the years 1984/85. Furthermore, the Bundespost is starting up operation of digital local exchanges. This continues its path along the digitalization of the telephone network and thus creates the preconditions for a future universal digital network. Besides telephone, this network will also transmit other already existing and new future telecommunication services. The step-by-step introduction of standard ISDN central-exchange systems in the area of the Bundespost, however, can only be expected beginning in 1987.

For the operator of analogue telephone extension systems, it is important to know: The Bundespost when introducing the ISDN, will make sure that communication equipment of the present design can continue to operate without restriction.

At this time, there are about 1.1 million extension systems in the Federal Republic, with 8.3 million speech stations; the Federal Republic furthermore has the most dense penetration of the business area with extension systems, and about 70 percent of the total telephone traffic has its origin or destination in an extension system. About one-third of all data transmissions today are already executed through the telephone network, between about 60,000 data stations.

Digital technology will also penetrate in the telephone extension station area. However, one must clearly see that the digital telephone extension systems, which have been developed by a number of vendors, are at this time not yet capable of ISDN connection, since only at the end of 1984 will the ISDN standards be specified. Only after this date, can the integrated electronic modules be definitively developed and tried, which are necessary for implementing systems with ISDN capability. Beginning in 1985, the first ISDN-capable extension systems will be offered on the market.

Finally, the digital extension systems that are capable of connection to ISDN will be widespread enough so that a fully digital connection path exists from one subscriber to another. Only then will the advantages of digital technology--better speech quality and speed in dialing--become fully effective. Digital terminals can then also be used as telephone terminals. Here it should be noted that the digital terminals will have to reach or even improve the price/performance ratio of currently available analogue terminals.

For some time, the conception of a universal digital telephone extension system, the so-called communication system (K-System) has been discussed. This central-exchange communication system should make possible the exchange of messages between different terminals, for example telephone, data stations of various types, teletypewriters, teletex units, as well as among one another within the installation and also with main connections of the public ISDN network. A K-System defined in this way covers the area of the much discussed in-house networks (local area networks = Lans).

A K-System should make possible internal and external communication of a group of terminals. For this purpose, an internal connecting network and connection to the public network are necessary. So that connections can be made as needed, a central-exchange capability is necessary. The terminals themselves are part of the K-System. It has three important components: a transmission function, a connecting network, and the terminals. Besides the internal transmission of various types of messages, and the connection of various terminals, connection to various main connections is an essential criterion of K-Systems.

A Single Terminal Should be Able to do Everything

A final regulation concerning K-systems does not yet exist at this time. So that communication with the outside world, which requires the public network, be functional, a series of conditions must be fulfilled which finally also have to be specified in the regulation. Technical conditions must also be fulfilled so that K-systems can work together with the public network. For example, the levels and frequencies must be mutually coordinated so as to make possible an exchange of signals. Furthermore, the meanings of the individual signals must be specified and agreed upon. Finally, another point is to take into account the operating conditions (for example waiting times and losses in the handling of traffic) and the economic conditions.

The mere availability of various communication services at the work station will no longer suffice in the future: The integration of several services in a single terminal is an objective that starts from a user-oriented work station. A multi-functional communication system must facilitate and render more effective the exchange of messages in its various phenomenological forms. A multi-functional terminal will be acceptable only when it is a true working means.

The path to the office and the work station of the future will be traversed in small steps. Pilot installations will impart experience to the user, and from this further developments can arise. For previous developments--the first step in the direction of multi-functional communication terminals--a restriction of possible non-ISDN compatibility and the risk of subsequent replacement naturally is valid. But even today, with knowledge of existing standardization and with knowledge of present discussions for digital ISDN subscriber connections, specific ideas can be formulated. It is known which functions and components could be comprised by a multi-functional terminal.

Future communication services will deal with the communication forms of speech, texts, facsimile, and data. Simultaneous utilization of various services must be possible, even with different objectives. This requires the availability of several useful channels. With the digital ISDN connection, therefore, the available channels will include not only the two useful channels but also a channel provided for signaling and for slow data transmission applications. Multiplex operation of the useful channels here furthermore makes possible several simultaneous transmissions to one destination. While the communicative working sequences must run according to specified standards, organizational working sequences must be specified as little as possible by the services of the terminals, in order to be subsumed within the organization of an enterprise and in order to leave the user playroom in designing his working sequences.

Improving Operator Guidance

Multi-functional terminals should have a modular structure, because not every user need have access to all services. Certainly, a subdivision according to various application emphases will crystallize out; arbitrary combination capability of individual components is out of the question currently and in the near future for reasons of cost.

For speech communication, loudspeakers and a microphone are necessary, which now as before are most suitably housed in a handset. For text input, one will continue to need keyboards. Only when appropriate speech analysis systems are available can keyboards be replaced by a speech input. For inputting image-point and character-point coded messages, one can use facsimile and character code readers (optical scanners). Optical messages are represented by screens; as a supplement one can use hard copy units. Furthermore, external storage media are required--suitably floppy disk systems or, with larger data quantities, Winchester disk units. The communication unit with the central microcomputer control system makes possible access to the digital ISDN.

In a few years, displays and printers will be available for character-point and picture-point coded communication. Only then will a functional integration of similar components be possible--as currently is not yet the case--for variously coded messages (for example display screen and hard copy).

Multi-functional terminals require operator guidance because of their complexity. However, this may not simply end with the present technique of the search tree. Associated systems implemented as hardware or software can improve operator guidance. Furthermore, the following is important for the acceptance of multi-functional systems: Inputs must be easily corrected, it must be possible to terminate a wrong command at any time. After interruptions, it must be possible to continue working at the point where the interruption took place.

But immediately the question of economy now arises, because all these requirements imply high expenditure especially in the software area. For this reason, one must check whether functions can be reduced. However, one should not give up operator guidance, since the human person as a user must accept the system. Multi-functional communication terminals should serve to facilitate and support the exchange of messages.

8348
CSO:5500/2562

COMMUNIST FRONT MP'S FEAR WESTERN INFLUENCE FROM TELE-X

Helsinki HUFVUDSTADSBLADET in Swedish 16 Dec 83 p 10

[Text] There was a long debate about future Nordic TV co-operation, with many questions raised, when the Parliament yesterday evening in one session took a position on the government's proposition about Finnish participation in the technical development of the Tele-X satellite. Occasionally it became seriously heated, between the non-socialist parties and the People's Democrats on the left. There was also an encounter between SFP [Swedish People's Party] and DFFF [People's Democratic League].

The Tele-X project as such played an obscure role during the debate, and nobody directly opposed Finnish participation in it. The debate dealt strictly with technical development work and Finnish investment of about 44 million marks.

There will be a separate decision about eventual Nordic program-political cooperation, and in the opinion of the Foreign Affairs Committee the decision should be made in the Parliament.

'Enough Western Propaganda'

The debate on the Tele-X question was introduced by MP Esko-Juhani Tennila, who represented the FKP [Finnish Communist Party] minority. He did not directly oppose Finland's purely technical participation in the satellite project, but he definitely rejected the idea of coordinated Nordic TV transmissions. He especially objected to the possibility that there should be TV programs from other Nordic countries written in Finnish--something which would of course take place in compliance with the Nordsat project. According to him we do not need more "western propaganda," and he objected to giving other countries the opportunity to decide what programs will be sent to Finland.

Ben Zyskowiec of the Conservative Party replied to Tennila's "horror picture" by asking if it is really so dangerous that Finns can receive other Nordic radio programs and purchase other Nordic newspapers. "In principle it is the same with TV," he maintained.

Adverse for Nordsat

Minister of Communications Matti Puhakka emphasized that the proposition under consideration dealt only with Finnish participation in the technical development of the satellite, and that any future decisions about participation in program exchanges would be made later. In that connection he also mentioned the current hearings on the Nordsat project and said that deliberations for the present are largely discontinued. "It appears to be difficult to find common ground for the realization of the Nordsat project," he said.

Puhakka also said that the questions of the TV satellite are part of a larger issue which also includes cable TV legislation.

Tennila replied to Zyskiewicz that it is really very important that the right of decision in TV questions is retained in Finland, and said that he was very concerned about the future of Finnish culture. "Americanization has already gone alarmingly far."

'Referendum on the TV Question'

Georg C. Ehrnrooth of the Constitutional People's Party said that it is very remarkable to hear how concerned people now are about the future of Finnish culture, when in another connection they recently advocated cooperation across national borders. Ehrnrooth wondered if those on the left could imagine permitting the first advisory referendum to deal with the TV question, if the citizens favored Nordic TV programs and if the Finns in Sweden should have access to programs from Finland.

Minister Puhakka said in response that the cultural and economic-political consequences are also subjects for investigation in connection with the Nordsat project. He also mentioned the very limited possibilities for use of the Tele-X satellite.

Use of Tele-X in the Budget

Minister of Justice Christoffer Taxell said that the government in its budget bill for next year has taken a position on the use of Tele-X. In the budget justification it states that measures will be taken to improve TV programming for the Swedish-speaking population. For that reason, and in order to arrange program offerings also for Finns in Sweden, they were ready to use the capacity of Tele-X provided that a satisfactory agreement could be reached.

MP Ensio Laine (FKP minority) had the same doubts as his colleague Tennila concerning the future, which caused MP Ehrnrooth to reply that Laine was speaking absolutely contrary to the spirit of KSSE [expansion unknown].

"I hope that Laine understands that we can not become censors," he said, and he assured that he had the support of the majority of the people. Laine replied carefully that it is not unusual to discuss these questions between Finland and Sweden.

'Hire a Channel Quickly'

MP Martti Tiuri (Conservative Party) spoke in favor of the use of the TV satellite by saying that it could prevent enormous amounts of money being spent for the purchase of Japanese video equipment in homes. He recommended among other things that Finland quickly hire a channel in a future relay satellite for relay of TV-1 programs to Finns in Sweden. According to him that should not be expensive, only about 12 million marks.

MP Reino Paasilinna (Social Democrat) replied to Tiuri that it would be more expensive because of copyright fees that Finns in Sweden would be forced to pay. Paasilinna was positive toward Nordic TV cooperation. If Nordsat comes to nothing, the issue should be taken up by the Nordic broadcasting system. Tiuri said that there should not be especially large additional costs for the copyright--which Paasilinna later disputed.

MP Pertti Salolainen (Conservative Party) considered it useless to lament so much about program arrangements, since there will soon be many satellites in orbit. The monopoly of the broadcasting system will be broken in any case.

'People's Democratic League Consistently Favors Coastal Channel'

MP Sten Soderstrom (FKP minority) was also concerned about the cultural and political consequences of future Nordic TV offerings. He feared that the nonsocialists would consciously attempt to advance a "wild western" situation. Later he accused the Swedish People's Party and the Workers League of giving up the fight for the coastal channel, which the People's Democratic League did not do.

Minister Taxell said that Soderstrom gave a very warped picture of the situation, and said that support from the People's Democrats was most often nonexistent in the government.

Minister Taxell confirmed that either he or Kivisto suffers from poor memory, and that he does not believe it is he. He told about Kivisto's "troubled looks" when the deliberations about the coastal channel were taking place in the government's budget talks, and noted that it is clearly now a matter of different views on how history is to be written.

Kivisto answered indignantly that he would not judge Taxell's way of debating--he believes that it is the chairman's job to see that the debate

remains on a factual level. He finished by saying that discussions of this matter are only dedicated to making it more difficult to get improved program offerings for Finnish Swedes.

At the end of the debate the Parliament unanimously approved Finland's participation in the development of the Tele-X satellite.

9287

CSO: 5500/2573

SPAIN SIGNS EUTELSAT CONVENTION AS 21ST MEMBER

Paris AFP SCIENCES in French 1 Dec 83 p 28

[Text] Spain has signed the convention bringing about creation of the definitive EUTELSAT organization, it was announced at the Paris headquarters of this European temporary telecommunications satellite organization. Spain thus becomes the 21st European country to become a EUTELSAT member, with a financial interest of 4.64%. Actually, two signatures took place: one, that of Enrique Baron, Spanish minister of transport, tourism and telecommunications, who signed the convention, and that of Diego Martinez Boudes, delegate advisor of the Spanish national telephone company (CTNE), who signed the working agreement pertaining to utilization of the satellite system.

EUTELSAT is responsible for handling the space area of the European regional telecommunications satellite system which will primarily supply telephone, telex, data transmission, television and multiservice services for users and companies through European telecommunications administrations or recognized private companies.

Countries having signed the definitive EUTELSAT agreements are Austria, West Germany, Belgium, Cyprus, Denmark, Finland, France, Ireland, Italy, Luxembourg, Monaco, Norway, Netherlands, Portugal, United Kingdom, San Marino, the Holy See, Sweden, Switzerland and Turkey.

9436

CS0: 5500/2571

FRANCE SELECTS FIBEROPTIC STAR NETWORK FOR TELECOM SERVICES

Paris ELECTRONIQUE ACTUALITES in French 2 Dec 83 pp 1,4

[Text] As the signature of initial agreements draws near between the Postal and Telecommunications Administration and industrialists retained for the implementation of the first videocommunications cable networks, the National Center for Telecommunications Studies (CNET) has justified the technical options set aside for these networks. The basic choice relative to star and fiberoptic broadcasting allows, in fact, for seeing local videocommunications networks become part of a future wideband multiservice national network (RNIS) anticipated by the late 1990s.

This approach will also allow for the progressive introduction and testing of the notion of interactivity, from the local level (choice of TV programs) to total interactivity (videophone). "Our primary concern is to guarantee compatibility of local videocommunications networks among themselves (to allow for their hookup), as well as the capability for convergence with the general telecommunications network and commercial networks," stressed Mr Poitevin, CNET director.

Contrary to the Biarritz experience for which it was responsible only for technical follow-up, CNET is directly involved in the videocommunications cable network program, assigned by the government to the PTT (Telecommunications Ministry) just one year ago. CNET in fact has responsibility for compiling schedules (more specifically functional specifications) on the networks, as well as their technical follow-up. Faced with questions of costs and time limits, CNET has described two generations of networks while prescribing from the outset a star structure and hookups with fiber optics on the distribution side, which will allow each subscriber to talk with the distribution center on choosing his program (local interactivity).

Safeguarding the Future.

This basic choice safeguards the future even if the distribution part is the most difficult to set up. However, the investment is justified inasmuch, as CNET puts it, as installed fiber optics are designed to be operational for about 20 years. Such will not be the case with the uphill part for the local network, the so-called carrier network, as well as with certain electronic diagrams. The carrier network will be of the coaxial and arborescent type:

an economic choice linked to the service (teledistribution). This part of the network, leading from the distribution center to the central station (network terminal), should be replaced, in the system (digital) second generation, by fiberoptics. Likewise, lasers will replace electroluminescent diodes installed in the network's first generation. This evolution will allow for the introduction of new services (picture banks, etc.) and greater interactivity. The problem of TV program transmission arises alongside installation of local networks. Today, on the Biarritz network, TV pictures are transmitted over UHF radio waves. In a subsequent phase, TV programs will be transmitted by the "Telecom-1" satellite.

Later on, the satellite will be dropped in favor of hookups with single-phase fiberoptics, able to offer substantial capabilities over interurban transmission arteries. The process boils down, in a way, to "laying down" band width by charging connections with multiplexing.

Thus, a national wide-band multiservice network will be progressively set up, bringing together the general telephone network which will itself have evolved into a voicedata network with 144/Kbits/s (RITD), commercial and local networks. The CNET is keeping a watchful eye on this convergence toward the RNIS as well as on the compatibility of local networks to allow their interconnection. It may be noted that this objective justifies the government decision to assign the videocommunications cable networks to the PTT. This is an advantage which other countries will pay for dearly, those which have not adopted the same logical approach when this involves having their telecommunications network evolve toward a fully interactive multiservice telecommunications network.

Industrial Fallout.

The technical options set forth by CNET are further explained in 3 ways: the fiberoptic star networks allow independent programming, which is quite a different thing from the simple telecasting of an even large number of TV programs, and will place France in a favorable position in this new technology and allow for passing the initiative to local communities.

Programming independence should allow the subscriber to make an actual choice, at the time of his choosing, between different programs offered him: not only telecasts but picture banks. For them, CNET was behind the creation of the Immedia association which allows researching prospects offered by an interactive picture service. We can sense the interest in picture banks without really defining their primary capabilities (for the broad public or the professional?).

The industrial fallout from local videocommunications networks calls forth other comments. Admittedly, designers will be able to profit by their experience acquired in the new optic technologies in comparison with foreign competition concentrating on coaxial networks. One cannot help but feel a few regrets over the absence of a "network policy," integrating the production of opto-electronic components. An action by the DAIL, undertaken in

coordination with CNET operations and the DGT selections (suppliers and technical solutions), would undoubtedly ended in a different result from forthcoming today: most of the components earmarked for first-generation local networks will be supplied by foreign firms (primarily the majority of electroluminescent diodes and a large proportion of the connectors).

However, some products have been developed among our manufacturers, some of whom require industrialization to achieve a competitive price level. This lack of coordination at the DGT has probably if not blocked at least delayed the establishment of an optoelectronic components production facility.

Admittedly, the delays predicted in the implementation of the first local networks were extremely short, and the CNET had to be assured of the feasibility of the options set aside, which was equal to its task, so numerous were the pitfalls to be avoided with the technologies brought into play. Furthermore, the first generation of networks would fairly quickly have to give way to the second generation (fully laser optic digital networks, etc.) for which a major technological effort will have to be approved. According to the initial DGT plan, production orders for this second generation of equipment are scheduled beginning in 1986.

9436

CSO: 5500/2571

PLANS OF CGCT TO REACH FINANCIAL BALANCE BY 1985

Paris ELECTRONIQUE ACTUALITES 9 Dec 83 p 9

[Article: "CGCT Redeployed to Reach Financial Balance by 1985-1986"]

[Text] Whereas the first part of this year was marked by uncertainty concerning the future of CGCT [General Telephone Engineering Company], the second half of 1983 was used to consolidate the company's industrial redeployment and start the corresponding material and personnel investments.

CGCT's objective is to make a profit again by 1986, after refocussing its operations on corporate communications (45 percent of the company's personnel in 1986, compared with 25 percent in 1982) and consumer communications (18 percent of the company's personnel by 1986, compared with 8 percent in 1982), the share of public-switched networks being reduced to 37 percent (of company's personnel) by 1986, from 67 percent in 1982.

CGCT did not remain idle during the last six months. After being assured by the authorities that it would not be "sacrificed," the company undertook with praiseworthy courage a vast diversification program to save as many jobs as possible while rapidly reorganizing its finances. The program is supported by a 350-million-franc investment plan for 1983-1986 and a training effort involving close to 40 percent of the personnel.

The first stage of the operation ended last 30 June, when the licensing agreement of the Thomson MT-20/25 and MT-35 exchanges was signed. To optimize costs, Thomson and CGCT decided to rationalize equipment manufacturing: Thomson will produce the subscriber-connection units, and CGCT the Mu-320 computers and part of the system cores. To cover exports, the agreement is complemented by the creation of a Thomson-CGCT consortium guaranteeing CGCT 27 percent of all MT orders. In addition, CGCT will contribute to the development, adaptation and expansion of the MT line. The agreement was approved by the authorities which promised that, at least until 1986, CGCT would retain its present share of orders for public-switching equipment, i.e. approximately 300,000 MT exchange lines per year.

According to Mr Lestrade, CGCT chief executive officer, the CGE[General Electricity Company]-Thomson agreement is no threat to the agreement signed by Thomson and CGCT, at least as long as the MT line is continued. As far as the future system is concerned, CGCT may either contribute to its development, together with Thomson-CGE, or specialize in other products. For the moment, however, CGCT seems to look upon the CGE-Thomson agreement as an opportunity to offer a "certain" alternative to the PTT [Postal, Telecommunications and Television Administration] which fear a situation where they would have to deal with a single supplier.

From Teletex to Optical Networks

At the same time, CGCT has undertaken to reconquer its share of the private telephone market (which had fallen to below 10 percent). The company is now offering a new Digimat line of products (the latest models 160 and 500 were approved last September) which sell well in France and on export markets (especially to the ITT network). We should also mention that CGCT is planning to develop a voice-data version of its Digimat 500 model.

It is also on the field of corporate communications that CGCT decided to focus its diversification effort. To achieve this, it is counting on its Carthage multi-service network, its TLX-100 teletex machine, and its TV-200 credit-card validation terminal (which was ordered by American Express).

In addition, CGCT has signed agreements with innovative small and medium-size enterprises to produce their products industrially and market them. Thus, CGCT will manufacture Sepia professional microcomputers, Exelvision videogames and home computers, and Euroterminal printers. Another operation: CGCT is negotiating with Havas the manufacturing of the fourth TV channel (Canal Plus) decoder, as a second source of RTC [expansion unknown]. In addition, it is known that CGCT, in association with Velec, is producing fiber optical cable networks (contracts are said to be shared in the ratio of 30 percent to Velec and 70 percent to CGCT, which will produce the software, among other things). The first town that might be equipped by the associated companies should be Montpellier.

Thus "redeployed," CGCT should soon recover its financial balance. At least, this is the goal of the company. Yet, the 400 million francs that the authorities will soon pay to CGCT will not be enough to make for its deficit. To "get a new start," one billion francs in additional capital would be required. As far as financial results are concerned, 1984 is expected to be a difficult year (with losses about the same as in 1983, i.e. 270 million francs), but 1985 should see a marked improvement, and a benefit should be made by 1986.

9794

CSO: 3600/2374

BRIEFS

THOMSON, CGE TO STUDY INTEGRATED TELEPHONE SWITCHING--CIT-Alcatel and Thomson-CSF Communications have decided to form a joint company to prepare the future generation of telephone exchanges integrating voice, computer data and image transmission, the two companies indicated on 30 November in Paris. The engineering company, which might start operating early in 1984, depending on the outcome of its consultations with social authorities, will be in charge of preparing the development of the present E-10 system of CIT-Alcatel (CGE [General Electricity Company] group) and MT system of Thomson for their use with the "integrated service digital network." The next-generation telephone exchanges are the object of a gigantic worldwide race among major telecommunications equipment manufacturers. CGE estimated that the development of these exchanges would cost 200 million dollars per year for at least 5 years. The engineering company will be headquartered in Lannion and will employ 80 to 200 people during the next 3 years. It will work in close cooperation with the research departments of the two companies, which will continue their work. This initiative is the direct result of the redefinition of boundaries between Thomson and CGE, placing the latter in charge of telephone in France. The planned creation of such an engineering company had been announced last February by the former minister of research and industry, Mr Jean-Pierre Chevenement. [Text] [Paris AFP SCIENCES in French 8 Dec 83 p 40] 9294

CSO: 5500/2574

BRIEFS

RECOMMENDATION TO BUILD SATELLITE--The Hague, 4 Jan--The government has been advised by its science policy council to allocate 30 million guilders to help build the first experimental satellite of the European Space Agency's remote sensing programme, it was learned here today. In its report to the government the Advisory Council on Science Policy (RAWB) said this would give the Netherlands a three per cent stake in the first satellite. The satellite's main job will be to observe world seas and oceans, but its long-term potential includes weather forecasting and observing industrial activity in the oceans. The RAWB said Holland's stake in the programme could be increased if Holland gets a larger share in the construction of subsequent satellites or ground stations. The RAWB wants scientific research in the areas to be expanded and recommended that responsibility for carrying out the project should be entrusted to the transport and waterways minister. [Text] [The Hague ANP NEWS BULLETIN in English 4 Jan 74 p 5]

CSO: 5500/2578

LARGE PHONE EQUIPMENT CONTRACT ADVANCES

Oslo AFTENPOSTEN in Norwegian 14 Dec 83 p 24

[Text] The majority on the Communications Committee in the Storting [Parliament] favors approval of an agreement for ordering 885,000 automated numbers for the period beginning in the present and extending into 1987. This entails equipment for 640,000 digital automated numbers and 245,000 analog numbers.

Both Televerk [Telecommunications Department] and the Communications Committee have previously expressed their agreement on the choice of the so-called system type 1240, with the Standard Telephone and Cable Factory [STK] as supplier of digital telephone-exchange equipment.

The committee's minority, which consists of members of the SV [Socialist Left Party], cannot support the proposal as it now stands. They feel nothing has come to light which indicates that serious attempts have been made to bring about cooperation between STK and the EB [Electric Bureau], cooperation which would result in a fair and acceptable deal for the workers of Hisoy. SV will instead propose that a contract be drawn up with STK for the delivery of 500,000 lines, while at the same time EB is offered the chance to deliver 140,000 lines at the same price STK would deliver them for.

12327

CSO: 5500/2569

AGENCY HEAD ON OUTLOOK FOR TELECOMMUNICATIONS FIELD IN 1984

Oslo AFTENPOSTEN in Norwegian 15 Dec 83 p 31

[Article by Knut Lovstuhagen: "Telephone Waiting List Soon Only a Memory; Just 14,000 Phones Remain to Be Installed"]

[Text] Those waiting to have telephones installed are being serviced a lot faster than even Televerk [Telecommunications Department] had expected. The department had reckoned with roughly 20,000 customers still on the waiting lists at the end of the year, but at last count only 14,000 remained. By the end of 1984 Oslo and Tromsø will be the only places in this country with waiting lists for telephones, and even these lists will become just a memory in the course of 1985.

Director General Kjell Holler provided this information at a press conference on Wednesday and added that in 1983 the net increase in the number of orders for phones was 120,000, which is a new record. He also indicated that conversion to automation is now well over 99 percent. When the district of Troms becomes fully automated in 1985, all of Norway will then be converted. "Then we will be done with a job which the Swedes finished 15 or 20 years ago, and while will mean a lot in terms of future profits," he said.

Earnings Doubled

With a net profit of approximately 1.2 billion kroner in 1983 Televerk almost doubled its earnings of the year before, when there was a gain of 644 million kroner. Out of this year's profits 790 million kroner will be used for investments. During the present year the department has invested more than three billion kroner, of which 65 percent was financed by Televerk's current revenues. In 1984 79 percent will be financed with its own capital.

"The level of investment is so high that we have to borrow between 700 and 800 million kroner to finance the expansion of our telecommunications services," Holler pointed out. "Beginning January 1st, our rates will be increased by an average 2.5 percent, which will give us an excess profit of 156 million kroner next year."

The total productivity of Televerk has increased on the average by five percent over the last three years.

The seven cable-TV companies licensed to diffuse television signals from the OTS [Orbital Test Satellite] must be prepared for a collective bill of 700,000 kroner from Televerk this year, if they want to continue in operation when the transmissions are sent out from the ECS [European Communications Satellite]. "That is what we have to pay the international satellite organization Eutelstat, and you can be sure that we would come in for strong criticism if we tried to use our telephone customers, and not the cable companies, to cover this amount," said Ole Petter Hakonsen, technical director in the Teledirectorate, to AFTENPOSTEN.

Delays

Teletex (or Superteleks) service has been delayed and will scarcely be in full swing before next summer. Experimental operation gets underway in March, although the intention had been to get the service off the ground a couple of months ago. Right now there are supplier problems. As far as data services are concerned, Televerk has not managed to achieve the goals which were set for the delivery time of the Datel modem and the Datel hookup. The Swedish Telecommunications Department is still having the same problem in Stockholm. Nor does Televerk, when it comes to the installation of the serial telephone apparatus systems, count on reaching its goal of an average delivery time of 25 days before the end of the year. In the third quarter of this year the average delivery time was 41 days, whereas three years ago one spoke of a 90-day wait.

The Teledata service will be introduced for the business community next year and for households in 1985. In addition, starting next fall, a beeper service will be set into operation; in its initial stage, it will be developed in cities and a few other densely populated areas.

At the press conference the question was raised of whether Televerk intends to introduce itemized telephone bills, so that its customers can keep track of where, when and how long they call. In reply it was pointed out that the coming digital telephone exchanges have a built-in option for itemized bills, but the question is how many people really want them. Many will probably oppose the idea of a phone bill that indicates exactly when and where a person has called. It is a matter of information of a personal nature.

12327

CSO: 5500/2569

AGENCY STUDYING COMMON TV, TELEPHONE CABLE NET FOR YEAR 2000

Stockholm SVENSKA DAGBLADET in Swedish 28 Nov 83 p 11

[Article by Gote Andersson: "TV, Telephone and Data, All via One Cable"]

[Text] By the year 2000 Sweden will have built a cable network for the transmission of television, telephone and data at a cost of about 10 billion kronor.

The government and the Committee on Mass Media are now deliberating which path Sweden should follow for the expansion, scheduled to begin in 1985-86.

There are two technical questions for which it is highly important to make a decision. One of them is how to construct the building network, meaning the cable network closest to the subscriber, the other is to what extent fiber-optical cables will be used in the first phase of the expansion.

SVENSKA DAGBLADET here presents the Telecommunications Agency's plans for how the expansion is to take place and the choices Sweden must make.

In the broad band, everyone will be offered at least 50 television channels, telephone, advanced data services and possibilities for banking and purchasing by means of cable. The signals in the optical broad band network are digital, that is to say ones and zeroes transmit images, speech and data.

This is what the Telecommunications Agency's vision of the future cable network in Sweden looks like. In principle, all the thousands of miles of cable which today exist all over the country will be exchanged for fiber optics cable. But the expansion of the broad band network will take place in stages. The first stage is the cable networks which the Telecommunications Agency has begun to build.

The reason for this major effort is primarily economic. It will become cheaper to have fiber optical cable than with today's telephone wire. But the picture quality will also improve with the digital signals.

Seventy Channels

The introduction of fiber optics in France and Denmark, for example, has been justified with the motivation that in the long run it will become cheaper than telephone wire. The large addition of new capacity provided by the fiber optics cable will thus be free. Within 10 years it will be possible to raise the capacity to 70 television channels in one single fiber.

"That is correct. The additional amount is free," says Rune Bernemyr, who is responsible for coordinating technical development at the Telecommunications Agency. "We see already see this in Goteborg, Stockholm and Malmo. The glass fiber as such is not cheaper, but there are so many advantages in handling and furthermore we have the greater capacity."

The agency today has a telecommunications system in which twin lead cables, coaxial cables, optical cable and radio link systems transmit telephone conversation and data services. In addition, the agency is responsible for the television broadcasts of Radio Sweden via a ground-based distribution system for television and radio which covers the country.

The signals in the telephone grid and the distribution network are analog, that is to say the signals can assume hundreds of different values across a certain scale. The telephone and television sets of today can only receive analog signals.

The analog signal system will be exchanged for a completely digital signal system in the optical broad band net, from microphone to microphone and from television camera to television set.

Local Cable Network

This is how the Telecommunications Agency envisions the local cable network: Television, data and telephone signals are transmitted via the airwaves, satellite, cable and radio link to a head-end station in the local cable-television network. The head-end station is identical with the telephone station in the area. From the head-end station the cables then go out to the subscribers.

The Telecommunications Agency faces several problems in building the cable network to the subscribers. The biggest one is that today's television receivers can only receive analog signals. In the optical cable network all signals have to be digital, as was mentioned.

There are three alternatives here: The first one is that optical cable is hooked up to every subscriber, but that means that each subscriber must have his own converter from digital to analog signals, a so-called D/A converter, and that will be tremendously expensive. The additional cost could be 10,000 kronor or more per subscriber, compared to more conventional technology.

The second alternative is that the Telecommunications Agency will lay optical cable to the housing unit of a multiple-family dwelling and let the tenants

split the cost of the D/A converter. The additional cost will then be about 300 to 1,000 kronor per subscriber.

The Telecommunications Agency is now planning for the third alternative, which is to lay optical cable to a point where there are still between 300 and several thousand subscribers left in the network. That is where they will place the D/A converter. This means an extra cost of about 20 kronor for each subscriber.

Coaxial cables, through which analog signals are sent, are then laid to the building from the D/A converter.

Some time in the 1990's the Telecommunications Agency hopes to be able to exchange the coaxial cable and run optical cable all the way to the subscriber, but that will be on the condition that the Swedish households will have exchanged today's television sets for a television which is capable of receiving digital signals.

"I think that the economic breakthrough for optical cable all the way to the subscriber will come about 1990," says Lars Aronsson, responsible for the Telecommunications Agency's cable-TV-project. "At that time there will hopefully be digital television receivers."

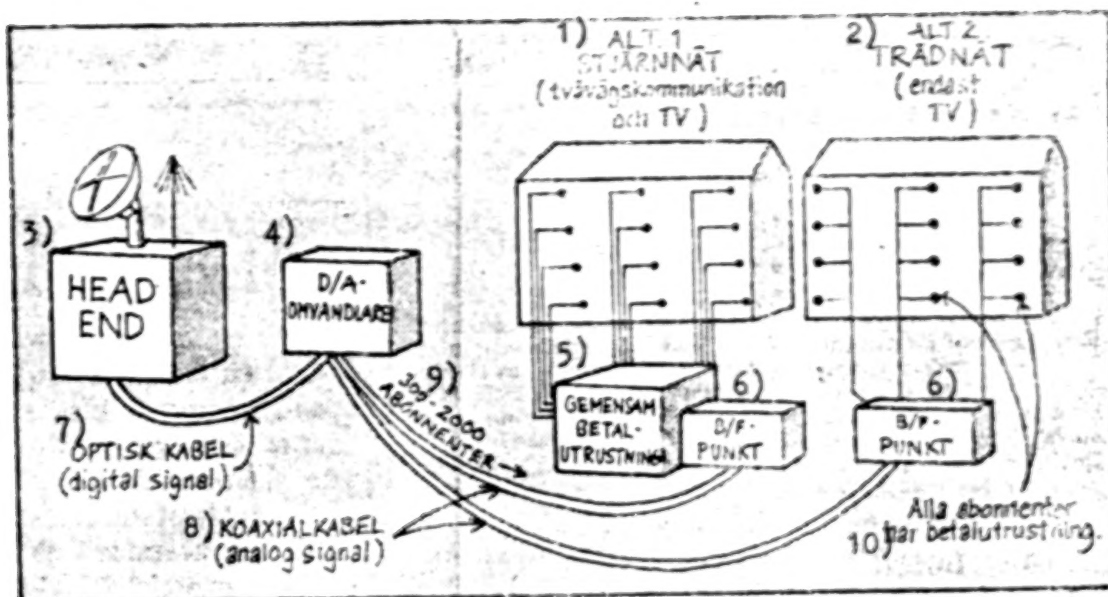
The Telecommunications Agency faces yet another major problem. The agency is of the opinion that today's central antenna systems or building networks are worthless; they cannot cope with the reception of cable television. There are today 60,000 central antenna systems in Sweden which serve half of the country's three million television subscribers.

"If we are to accomplish our demands for quality, practically all building networks will have to be replaced," says Matthias Gronberg, who is responsible for the cooperation between the Telecommunications Agency and the Ericson group.

Cascade Networks

When the cascade networks are rebuilt for cable television over the next few years, there are three alternatives. The building networks can be patched up to receive cable television. Alternative number two is complete overhaul of the entire present building network. Today's building network is called a tree network or cascade network because of its form.

The third alternative is to rebuild the whole building network into a so-called star-shaped building network. The cost of building star-shaped building networks is double that of a complete overhaul of today's building network. Nevertheless, the Telecommunications Agency has decided on the star-shaped building network. The reason for that is that star-shaped building networks can be used for both cable television and two-way communication, something the tree-shaped ones cannot; they can only be used for cable television.



The Telecommunications Agency wants to build 240 of these cable networks by 1990.

- Key:
1. Alternative 1. Starshaped network (two-way communication and TV)
 2. Alternative 2. Tree-shaped networks (TV only)
 3. Head end
 4. D/A converter
 5. Common charging equipment
 6. B/F point
 7. Optical cable (digital signal)
 8. Coaxial cable (analog signal)
 9. 300-2,000 subscribers
 10. All subscribers have charging equipment

The ROT Program

The Telecommunications Agency has drawn the government's attention to the idea that star-shaped building networks should be introduced, it is said. Furthermore, the agency has proposed that in carrying out the government's ROT program, meaning the restoration of older buildings, the building networks should be repaired and rebuilt into star-shaped building networks.

Lars Aronsson, project head for cable television at the Telecommunications Agency, says that the individual building owner cannot make the decision about building star-shaped networks. Instead, he points to a reason why the government should intervene.

"In the future we anticipate that subscribers will only pay for the services they want from the broad band network. Then a charging device, a so-called

decoder which reads what the subscriber has used, is necessary. With the star system the tenants can have a common decoder, but with tree-shaped networks each subscriber must have his own decoder."

Decision in 1985

"If star-shaped networks are built and the decision is made to introduce pay-television systems, the additional cost of star-shaped networks is paid for," Lars Aronsson says.

"The higher costs for star networks are paid for if 50 percent of the tenants decide to join a pay-television system. This is how much one saves by having a common billing device or decoder."

The national Committee on Mass Media, the cabinet office and the ministries are now in the process of taking a stand on the technical questions of building a cable network in Sweden.

"Both from industry and from the government we now need a strategy for the expansion," says Bjorn Andersson at the cabinet office.

In the summer of 1984 the Committee on Mass Media will submit proposals for introducing cable television in Sweden. The government will make the formal decision in the spring of 1985.

11949

CS0: 5500/2566

FIRST SATELLITE TELEVISION CHANNEL

LD161625 London PRESS ASSOCIATION in English 1034 GMT 15 Jan 84

[By Michael Day, PA Television correspondent]

[Excerpts] Britain's first satellite television channel opens tomorrow night giving 10,000 homes in Wiltshire a new choice of five hours of entertainment programmes. The new satellite network, Sky Channel will also offer sport and documentary programmes, but at the moment will not carry news or current affairs. The first programme will be beamed from 22,000 miles away in space to 10,000 subscribers in Swindon via their local cable system at about 6 pm tomorrow. By the end of the year Sky hopes to be available to about 400,000 homes and up to a million by the end of 1985. The channel has already screened three hours of English language entertainment programmes via cable to about 600,000 homes in Europe and they will get the extra two hours of broadcasts from tomorrow.

After tomorrow, the new channel will open at 5 pm each evening with a one-hour pop show.

The channel plans to increase its output each month going up to eight hours nightly by April.

The Sky channel represents a 9 million pound investment by Satellite Television which is 65 percent owned by Mr Rupert Murdoch's News International. Mr Patrick Cox, managing director of Satellite TV, said today that expansion by Sky would depend on how quickly new cable companies became operational under government plans for a cable TV system.

Already 11 companies have been given government go-ahead and cable authorities should be set up by the summer to license future cable operators. Satellite Television is already having talks with Rediffusion and other companies to sell the new Sky Channel.

The deal to put the channel into 10,000 out of 23,000 homes cabled up in Swindon was made with Radio Rentals.

CSO: 5500/2577

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